UNIFIED FACILITIES CRITERIA (UFC)

FINAL DRAFT
DESIGN:
CHILD DEVELOPMENT CENTERS

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UNIFIED FACILITIES CRITERIA (UFC)

CHILD DEVELOPMENT CENTERS

U.S. ARMY CORPS OF ENGINEERS

NAVAL FACILITIES ENGINEERING COMMAND (Preparing Activity)

AIR FORCE CIVIL ENGINEER SUPPORT AGENCY

Record of Changes (changes are indicated by \1\ ... /1/)

Change No.	Date	Location

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This UFC supersedes Navy and Marine Corps document MIL-HDBK-1037/2A Child Development Centers, dated 29 August 1997 and Air Force document Facility Design and Planning Guide for Child Development Centers (draft) dated 5 August 1994.

FOREWORD

The Unified Facilities Criteria (UFC) system as prescribed by MIL-STD 3007, provides planning, design, construction, sustainment, restoration, and modernization criteria, and applies to the Military Departments, the Defense Agencies, and the DoD Field Activities in accordance with USD(AT&L) Memorandum dated 29 May 2002. UFC will be used for all service projects and work for other customers where appropriate.

UFC are living documents and will be periodically reviewed, updated, and made available to users as part of the Services' responsibility for providing technical criteria for military construction. Headquarters, U.S. Army Corps of Engineers (HQUSACE), Naval Facilities Engineering Command (NAVFAC), and Air Force Civil Engineer Support Agency (AFCESA) are responsible for administration of the UFC system. Defense agencies should contact the preparing service for document interpretation and improvements. Technical content of UFC is the responsibility of the cognizant DoD working group. Recommended changes with supporting rationale should be sent to the respective service proponent office by the following electronic form: Criteria Change Request (CCR). The form is also accessible from the Internet sites listed below.

UFC are effective upon issuance. UFC are distributed only in electronic media from the following sources:

Unified Facilities Criteria (UFC) Index http://65.204.17.188//report/doc_ufc.html.
USACE TECHINFO Internet site http://www.hnd.usace.army.mil/techinfo/index.htm.
NAVFAC Engineering Innovation and Criteria Office Internet site http://criteria.navfac.navy.mil.
Construction Criteria Base (CCB) system maintained by the National Institute of Building Sciences at Internet site http://www.nibs.org/ccb.

Hard copies of UFC printed from electronic media should be checked against the current electronic version prior to use to ensure that they are current.

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FORWARD Continued

This UFC was created by representatives from the Services' child development programs and facility design and construction programs:

- Headquarters, U.S. Army Community and Family Support Center (HQ CFSC) and U.S. Army Corps of Engineers
- Navy Personnel Command Child Support and Facilities and Acquisitions Branches and Naval Facilities Engineering Command
- Headquarters (HQ), Air Force Civil Engineer Support Agency, Air Force Center for Environmental Excellence, and HQ USAF/ILV (Air Force Family Member Programs)
- Marine Corps Command Services, Child Development Program and Construction
- Office of Children And Youth, Office of Secretary of Defense

While all the Services have contributed program, design, and construction experience in order to define the criteria in this document, this UFC represents required criteria for the Navy, Air Force and Marine Corps only. The Army will continue to mandate the use of the Department of the Army Facilities Standardization Program Seven standard designs and the Supplemental Data Booklet for Army Child Development Centers for its CDC (age 6 weeks – 5 years) construction program.

The required Army documents were created as part of the Army's strategy to replace deficient facilities being used for childcare. The Army standard designs were developed to the definitive design level (10 to 15 percent) and provide criteria and guidance for the planning, programming, design and construction of Army Child Development Centers. The standard designs provide mandatory functional and special relationships and the associated outdoor play environment which meets the Army CDC Programmatic Objectives and Goals. The Army standard designs have been updated and revised as necessary to implement changes in guidance and criteria. The latest update occurred in 1995, and the documents can be found at the following web sites:

- TECHINFO, TI 800-00, Design Criteria: http://www.hnd.usace.army.mil/techinfo/to/800-01/ti80001a.htm
- Army CDC Standard Designs in the DA Facilities Standardization Program Library: http://155.74.8.101/stddgn/cdc/

The Army Center of Standardization (COS) for Child Development Centers is the U.S. Army Engineering and Support Center, Huntsville, AL. Information on Army CDC criteria can be obtained from COS point of contact Mr. Marcus Searles, voice (256)895-1672.

UNIFIED FACILITIES CRITERIA (UFC)
REVISED DOCUMENT SUMMARY SHEET

Document: UFC 4-740-14, Child Development Centers
Superseding: UFC 4-740-14, Child Development Centers, dated 1 August 2002

Description of Changes:

This draft represents a significant revision in format only. The vast majority of the actual criteria have not changed, but the information may be in very different locations and efforts have been made to eliminate duplication. The design criteria in Chapter 3 are criteria that apply to the building as a whole. The criteria in Chapter 4 apply only to the individual room or space in question. Therefore, the information previously in Chapter 7 has been moved to either Chapters 3 or 4. Open issues (highlighted in yellow) require Air Force input. No known open issues exist for Navy/USMC, and this UFC edition can be considered final for those Services.

In addition to formatting, the following significant changes were made in this UFC revision:

- The infant/pre-toddler room size was increased to better accommodate cribs.
- The adjacency diagram was modified to eliminate the suggestion of a building shape.
- Chapter 3, General Design Criteria, was reworked to incorporate new standard UFC paragraphs and to be more consistent with other facility UFCs.
- In Chapter 4, Specific Design Criteria, the breakdown between built-in fixtures and furnishings, fixtures and equipment (FF&E) was refined and a category added for "user-provided FF&E" (typically not part of contract).
- The sample Navy kitchen layout diagrams and equipment lists were refined (Appendix E).

Reasons for Changes: The UFC has been changed for the following reasons:

- Improve the organization of the document to improve readability, minize duplication, and more closely match other facility UFCs.
- Facilitate the application of this document to design-build projects and to coordinate with the new Navy Model Design-build RFP.
- Correct errors and outdated material and references.

Impact: The following improvements should result from this revision:

- This UFC updates and clarifies the basic requirements for military child development centers. This UFC will reduce the initial cost of design and reduce costs associated with redesign of facilities that do not meet minimum standards.

- The improved performance-based criteria and coordination with the model RFP (Navy) should reduce design-build proposals. Responders will be able to apply industry best-practices and more creativity to their proposals to reduce costs while still meeting the minimum technical design and construction standards outlined in Chapters 3 and 4.

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CHAPTER 1 INTRODUCTION

1-1 SCOPE OF DOCUMENT.

UFC 4-740-14 provides guidelines for evaluating and planning the site, determining programming requirements, establishing space distribution needs, determining building size, and designing all outdoor and indoor spaces for Tri-Service and Marine Corps Child Development Center (CDC) facilities to support the child development program. (Throughout this UFC, the term Tri-services is intended to include the Marine Corps, except where specifically indicated.) The information in this UFC applies to the design of all new construction projects as well as renovation projects. Renovation projects should update existing facilities to meet the guidance and criteria within budgetary constraints. Further, this UFC serves as an ongoing program management tool within the Tri-Service child development programs. This UFC is not intended as a substitution during design for thorough review by individual Child Development Program Managers in each of the Services.

Chapter 1 provides an overview of the UFC document, an overview of the facility, and the applicable regulatory authorities. Chapters 2 and 3 provide planning and design criteria that apply to the facility as a whole. Chapters 4 and 5 provide design criteria for the individual facility and site spaces and establish the baseline levels of features and finishes to be provided in those spaces. This UFC also identifies desired or allowable design features. The objective of this UFC is to promote centers that are child-oriented, developmentally appropriate, environmentally sensitive and functional.

1-2 APPLICABILITY.

UFC 4-740-14 is intended to be a source of basic architectural information for all individuals involved in the planning, programming, design or evaluation of CDC facilities and managing a child development program. Note: where one or more Service's criteria vary from the other Services' criteria, it is noted in the text as a **Service Exception.** If a Navy exception is noted, it does not apply to the Marine Corps unless specifically noted. Specific users of this UFC include the following:

1-2.1 Architects and Engineers.

Architects and Engineers (A/Es) who will provide design services under the direction of the individual design agencies, including the Naval Facilities Engineering Command and the Air Force Civil Engineer.

1-2.2 Tri-Service Planning Personnel.

These individuals must use this UFC for pre-design planning or to assess the extent of improvements required in an existing center in order to achieve the established standard.

- Headquarters Staff
- Major Command Staff
- Installation Commanders
- Installation Facilities Management
- Installation Technical Proponents
- Program Directors
- Facility Staff

1-3 SCOPE OF FACILITY.

The CDC accommodates a Department of Defense child care program per Public Law 104-106, Section 568 of Title 10, United States Code, and Department of Defense Instruction (DODi) 6060.2, *Child Development Programs.* The MCCA of 1989 (Pub.L.101-89) was recodified as the Military Family Act and Military Child Care Act, February 10, 1996.

1-3.1 Functional Program Areas.

Table 1-1 lists and describes the CDC functional program areas. They are broken down into four categories: core administration, staff support, facility support, and child activity rooms.

TABLE 1-1. PROGRAM AREAS

Functional Program Area	Description
Core Administration	
Entrance/Lobby	Includes vestibule, circulation from the vestibule to the reception desk, the circulation in front of the reception desk, and areas dedicated to waiting.
Reception/Work Area	Accommodates staff workers behind the reception counter and any circulation to adjacent office space, the isolation area [isolation area is no longer used for Navy/USMC. Need confirmation from other Services that this can be deleted for all.]. Includes office equipment general work space.
Administration Offices	The required offices will vary both by Service and Installation. Refer to Chapter 2, Administrative Offices for

TABLE 1-1. PROGRAM AREAS

Functional Program Area	Description
	Service contacts and additional guidance.
Director's	Work, securable storage and conference space for the CDC director
Assistant Director	Workspace for an assistant director; not included for every Service or facility.
Administrator	Work, storage, and conference space for the CDC administrator. May be combined with the director's office.
Training and Curriculum Specialist	Workspace for a specialist, space for staff training, and file storage. May be combined with other spaces.
Family Child Care (FCC)	Air Force and USMC program. Workspace for program staff (one staff per 40 FCC providers, i.e., licensed or in the process of becoming licensed), one clerical, one resource and referral person (as required) and file storage. May require additional space for an FCC lending program. May be combined with other spaces.
Child Development Home (CDH)	Navy program. Workspace for program staff (one staff per 30 CDH providers, i.e., licensed or in the process of becoming licensed), one clerical, one resource, one referral (as required), and file storage. May require additional space for a CDH lending program. Not included for every facility.
Resource And Referral	Workspace with securable storage. May not be located in the CDC or may be combined with other spaces.
Isolation/Health Room	Area for isolating and observing a sick child. [No longer used for Navy/USMC. Need confirmation from other Services that this can be deleted for all.]
Isolation Toilet	Area for use by children in isolation, handicapped adults, staff, and visitors in small centers. [No longer used for Navy/USMC. Need confirmation from other Services that this can be deleted for all.]
Staff Support	
Break/Staff Room	Includes counter/cabinet space for microwave, sink and refrigerator; tables and chairs; and closet for coats.
Training Room	Conference room with resource bookshelves.
Central Storage	Storage of both bulk and individual items for use within the child activity rooms and in the office area, including equipment such as Audio/Visual equipment that is rotated in the child activity rooms or used in training.
Staff/Public Toilet	ADA-compliant and sized based upon building code requirements.
Facility Support	
Kitchen	Accommodates all food preparation, dishwashing, cart storage, dry goods storage, coolers and freezers, and cook work stations.
Janitorial	Accommodates janitorial supplies, equipment, and mop sink. Large facilities may have more than one room
Laundry	Accommodates washers and dryers, one dryer more than the number of washers, a sink, and work surface for folding.

TABLE 1-1. PROGRAM AREAS

Functional Program Area	Description
Other Facility Support	Includes building circulation, construction, mechanical rooms, and electrical rooms (see Chapter 4 for more information). Generally calculated at a percentage of total building area, ranging from 20 to 25 percent.
Child Activity and Multipurpose Rooms	
Child Activity Rooms (CAR)	Accommodates developmental and routine activities, children's displays, eating, and all other child care activities in a self-contained environment
Infants and Pre-toddlers	Accommodate two groups of infants
Toddlers and Preschoolers	Accommodate two groups of toddlers
Preschoolers	Accommodate two groups of preschoolers
Multipurpose room	Optional space to accommodate children 24 months to 6 years of age for large group activities, wheel toy play, exercise, group games, or indoor play in extremely hot or cold climates. This room may also support other activities such as parenting classes and staff training.
Outdoor Activity Areas	Supervised outdoor area with direct access from the CARs for recreation and program activities.
Infants and Pre-toddlers	Separate, fenced areas with visual and audible connections to the other outdoor activity areas and limited play equipment. Infant and pretoddler areas may be combined or may be separate if required to maintain direct access from the CARs.
Toddlers	Separate, fenced area with visual and audible connections to the other outdoor activity areas and additional play equipment.
Preschoolers	Separate, larger fenced area with visual and audible connections to the other outdoor activity areas, additional play equipment, and more structured activity areas.

1-3.2 Users of the Facility.

The primary users of CDCs are as follows:

1-3.2.1 Children.

- Infants (6 weeks-12 months)
- Pre-toddlers (12 months-24 months)
- Toddlers (24 months-36 months)
- Preschool Age (3-5 years)

1-3.2.2 Facility Staff.

- Program Administrators/ Directors

- Assistant Directors
- Training and Curriculum Specialists
- Group Leaders/Caregivers
- Family Child Care Coordinators (Air Force and USMC)/Child Development Home Directors (Navy)
- Receptionist or Operations Clerks/U.S. Department of Agriculture (USDA) Clerks/Monitors
- Cook and Food Service Workers
- Custodial Staff

1-3.2.3 **Parents.**

1-4 REGULATORY AUTHORITIES.

See Chapter 3, General Design Criteria for references to the governing building and construction codes and statutes. The program regulatory authorities are included below.

1-4.1 Military Authorities.

The comprehensive authorities having jurisdiction for CDCs are the following:

1-4.1.1 Navy.

The following authorities must approve the acquisition methodology, the design team composition, site selection, facility requirements, the DD Form 1391, concept development, and the final DB RFP or final design:

- Commander of Naval Installations Command (CNIC) N912 (Program Manager), Integrity Drive, Millington, TN 38055-6560.
- NAVFAC FAC/FEC

1-4.1.2 Air Force.

Coordinate all stages of design development of CDC new construction, addition/alteration, and renovation projects as follows:
Projects estimated at $500,000 or more with MAJCOM CE/Services and HQ AFSVA/SVXF (10100 Reunion Place, Ste 502, San Antonio, TX 78216-4138) and HQ AFCESA (HQ AFCESA/CESM, 139 Barnes Drive – Suite 1, Tyndall AFB, FL 32403-5319).

Consult Major Commands for all other projects. Consult the AF Project Managers Guide for Design and Construction at http://www.afcee.brooks.af.mil/dc/products/dcproducts.asp. For all projects requiring certification or re-certification of the facility, contact HQ AFCESA/CESM, 139 Barnes Drive – Suite 1, Tyndall AFB, FL 32403-5319.

- HQ AFCEE (architectural, publication coordination).
- HQ Air Force Civil Engineering Support Agency (AFCESA), http://www.afcesa.af.mil/ (technical, fire, life safety).
- HQ AFSVA (functional requirements)
- HQ USAF/ILV (functional policies)

1-4.1.3 **Marine Corps.**

The following authorities must approve the acquisition methodology, the design team composition, site selection, facility requirements, the DD Form 1391, concept development, and the final DB RFP or final design:

- HQ, USMC (MRZ-3) (MRD), Quantico, Virginia 22134.
- LSC: NAVFAC EFD/ CNIC

1-4.2 **Occupancy Classification.**

CDCs are classified as Day-Care Occupancy when applying the NFPA 101, Life Safety Code and as Educational Occupancy, Division 3, when applying the International Building Code. For part-day preschool programs or kindergarten facilities, the requirements for Educational occupancies are applicable.

1-4.3 **Certification.**

The CDC must be certified by the DoD and accredited by an external accrediting agency.

1-4.4 **Additional Requirements.**

See Chapter 5, General Design Requirements for additional certification requirements on the design of the outdoor activity area and the selection and installation of playground equipment.

1-5 **ACQUISITION METHODOLOGY.**

There are two primary acquisition methodologies for Government construction: design-bid-build and design-build. Service personnel involved with project development should understand the acquisition methodology as it affects how and when they can influence the resulting facility design.

1-5.1 Design-Bid-Build.

The design-bid-build acquisition methodology is characterized by separation between the designer of record and the construction contractor. An internal or Government-contracted architect or engineer designs the facility, and the Government separately contracts for construction. Service personnel have the opportunity to interface with the designer of record and influence the design at several predefined points in the design process.

1-5.2 Design-Build.

The design-build acquisition methodology is characterized by the combination of design and construction services under one contract. The Government contracts with one entity to prepare the design and to construct the facility based on the requirements outlined in a request for proposal (RFP). Service personnel have the opportunity to influence the design during the development of the RFP and during the design-build contractor selection process. Any reviews that occur post contract award are limited to ensure compliance with the RFP and the contractor's proposal. Government-initiated design changes, particularly those that impact cost and schedule, typically cannot occur after award without a contract modification.

CHAPTER 2 PLANNING AND LAYOUT

2-1 FACILITY PLANNING.

Evaluate the total childcare requirements for the populations and missions of the individual installation. Plan and budget for durable materials and details. A CDC is used intensely, and the design shall be sensitive to the life cycle cost of materials.

2-1.1 Facility Classification.

Once the demand has been determined, classify the facility size as follows:

- Small. Less than 100 children
- Medium. 100 to 200 children
- Large. 201 to 304 children

No CDC will accommodate less than 48 children.

2-1.2 Age Groups and Group Sizes.

Children are grouped according to age and different age group sizes vary. This is used to determine the number and type of Child Activity Rooms (CARs) in the CDC.

2-1.2.1 Ages Accepted.

Child Development Programs accept children from six weeks through five years of age. Some other programs accept children whose parents are not at home before and after school hours or who wish to place children in a care situation between school and family-gathering time. However, before and after school care programs usually occur somewhere other than a Child Development Center for Tri-Service facilities. The three basic scheduling patterns are as follows:

- Full Day. Children attending for a full day, for example, as many as 12 hours.
- Part Day. Children attending part of a day, typically a half-day or less on a regular, scheduled basis.
- Hourly. Children attending for one hour or more on an infrequent or unscheduled basis.

2-1.2.2 **Separation and Mixing of Children.**

Separate spaces and program options for older children from those for younger children, but also provide opportunities for overlap of different ages with the proper supervision.

2-1.2.2.1 **School Age Program.** The school age program is not usually included within the CDC; it is typically located elsewhere in other approved buildings. However, if the requirement for preschool age care decreases, excess preschool space in a CDC may be used for younger school-age care. If a school-age program is provided in a CDC, comply with UFC 4-740-06, *Design: Youth Centers* for those areas. Separate the the child activity rooms and the school-age care activity rooms. Other programmed spaces can overlap within the facility footprint; however, the requirement for a controlled entry point to the CDC must be met.

2-1.2.2.2 **Mixed-age Program.** A facility that includes school-age children with the typical CDC age groups may be appropriate for some installations.

2-1.2.3 **Group Size and Caregiver-Child Ratio.**

Table 2-2 provides the age groups, ratios of caregiver and children, and the group limits. In any individual center, actual age ranges between groups may overlap. In some centers, children may be grouped in mixed-age activity rooms. In these cases, use the design criteria for the youngest children in the group. Appendix B provides more information on the age groups and their developmental needs.

TABLE 2-1. CAREGIVER/CHILD RATIOS

Group	Age Range	Adult/Child Ratio	Group Limit*
Infants	6 wks. to 12 mos.	1 to 4	8
Pre-Toddlers	12 mos. to 24 mos.	1 to 5	10
Toddlers	24 mos. to 36 mos.	1 to 7	14
Pre School Age	3 yrs. to 5 yrs.	1 to 12	24

* The group limit is the limit for children only.

2-2 **SITE PLANNING.**

2-2.1 **Land Area Requirements.**

See UFC 2-000-05N, (P-80) *Facility Planning Criteria for Navy/Marine Corps Shore Installations* for this information. [confirm AF reference or need for old data]

2-2.2 **Site Selection.**

Select a site that meets the following criteria.

2-2.2.1 **Noise Requirements.**

Site CDC facilities consistent with the following noise environment requirements for each Service:

- Navy. OPNAVINST 1700.9 Series
- Air Force. AFH 32-784, AICUZ PROGRAM MANAGER'S GUIDE at http://afpubs.hq.af.mil/pubfiles/af/32/afh32-7084/afh32-7084.pdf

If noise levels at the CDC exceed the following then comply with the acoustical criteria provided in Chapter 3, Exterior Design:

- Outdoor Play Yards. Continuous: 70 dBA, Intermittent: 80 dBA
- Building exterior with sleeping and quiet areas placed next to exterior wall. Continuous: 60 dBA, Intermittent: 65 dBA
- Building exterior with sleeping and quiet areas protected and not located next to exterior walls. Continuous: 65 dBA, Intermittent:70 dBA

2-2.2.2 **Natural Light.**

Do not use locations without access to natural light for new CDCs.

2-2.2.3 **Natural Environment.**

Select a site with as many natural amenities as possible for a beneficial learning environment. These include the following: nontoxic plants and trees; non-dangerous animals; earth forms; rolling terrain; and natural protection from the sun, wind and rain. Develop a site plan that makes the most of the site's existing natural resources. Where possible, conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

2-2.2.4 **Visibility.**

Locate CDCs in areas of high visibility to deter crime and vandalism, e.g., locate amidst community facilities, housing, and parks.

2-2.2.5 **Hazards.**

Do not locate CDCs near the following hazards or nuisances:

- Fuel or other HAZMAT storage buildings
- Service stations
- Maintenance shops, including woodworking and painting areas

- Laundry facilities
- Large kitchen/food preparation facilities
- Aircraft runways
- Railroads
- Security areas
- Any facility producing odors, smoke, dust or pollution
- Unsafe buildings
- Explosives
- Radiation
- Utility substations and overhead power lines

2-2.2.6 **Vehicular Traffic.**

Avoid locations near busy streets and intersections. If this is not possible, provide mitigation measures, such as bollards, to increase safety at pedestrian areas and playgrounds.

Prepare a site traffic impact study to determine the traffic patterns and the peak demand for parking. A large CDC will have a significant impact on peak traffic patterns. The circulation and parking demand includes the turnover for the hourly care program and the part-day care program. See Chapter 3, Parking/Vehicular Circulation, for specific requirements.

2-2.2.7 **Soil Testing.**

Before selecting the site for the center and its playground, test the soil for the presence of dangerous contaminants. Continue to monitor the site, at the direction of the environmental safety staff, to ensure that it does not become subsequently contaminated, especially by lead. This is particularly a concern in urban areas or where there is a heavy concentration of automobiles or industrial facilities. Investigate proposed playground locations adjacent to old structures, which may be painted with lead paint or contain other hazards. Check with the Environmental Installation Restoration Program and the Underground Storage Tank Program. Also, check previous uses of the site.

2-2.3 **Site Layout.**

2-2.3.1 Internal Traffic Flow.

Site the CDC so the building is clearly visible to cars and pedestrians coming to the facility. Separate service and delivery access from the public and children's areas. Eliminate the potential for conflict between moving vehicles and children. See Chapter 3, Exit Requirements, for additional requirements.

2-2.3.2 Outdoor Areas.

Design the outdoor activity area to be directly accessible from the CARs. When planning the outdoor activity area, consider prevailing weather patterns that may affect children's comfort. For example, locate, as necessary in some geographical areas, the outdoor areas on the south side of the building where they will be protected from northerly winds. See Chapter 5 for more information.

2-3 SPACE REQUIREMENTS.

2-3.1 Introduction.

This UFC states area requirements in terms of Net Floor Area (NFA) or Gross Floor Area (GFA). NFA is the net usable area of spaces, excluding the area required for building construction and mechanical and electrical equipment. GFA is the total building footprint measured to the exterior side of the exterior wall. Space requirements for individual spaces are expressed as NFA. GFA is determined, where appropriate, by adding to NFA totals an estimated area for building construction (including wall thickness, ventilation space, etc.) and mechanical/electrical equipment rooms.

2-3.2 Space Programs.

Sample space programs for the three CDC size classifications are illustrated in Tables 2-2 to 2-5. They are grouped according to the four functional program areas.

For Navy and USMC CDCs, an interactive spreadsheet is available to develop a space program for a specific project. It is completed by first selecting the appropriate facility size classification. This generates a partial space program per Tables 2-2 through 2-5 of this UFC. The programmer then must make additional selections for offices and workstations, the quantity of age-specific CARs, and optional spaces with program manager approval. This spreadsheet is available as a downloadable Microsoft© Excel© file from the Whole Building Design Guide Website (www.wbdg.org) under the DoD page, Unified Facilities Spreadsheets.

2-3.2.1 Core Administration, Staff Support and Facility Support.

The space programs illustrated in Tables 2-2 to 2-4 are purely sample programs and are not intended to establish fixed design programs for CDC planning teams. Determine the actual total space program for CDC Core Administrative functions, Staff Support functions, and Facility Support functions by considering the anticipated number

of children accommodated by the facility and the specific space and design criteria provided in this UFC.

2-3.2.2 Child Activity and Multipurpose Rooms.

The space requirements for Child Activity Rooms in Table 2-5 are mandatory and shall not be changed. Determine the total number of activity rooms for specific age groups based on the number and ages of children to be accommodated per Chapter 2, Facility Planning.

Verify the need for a multipurpose room with the Service contacts provided in Chapter 1, Regulatory Authorities. **Service Exception:** Air Force contacts will determine when climatic conditions warrant the requirement for a multi-purpose room. As a general rule, only those Air Force bases with extreme (heat, cold, rain) climates should consider programming a Multi-purpose room. Climate data is available at https://www2.afccc.af.mil/prodloc_mil/index.html. Climate data is also available at http://www.afccc.af.mil/ using the "Other Domain" link to submit a service request for the climate data.

TABLE 2-2. SAMPLE PROGRAM SPACE REQUIREMENTS FOR CORE ADMINISTRATION

Functional Spaces	Standard Areas					
	Small CDC		Medium CDC		Large CDC	
	m^2	$ft.^2$	m^2	$ft.^2$	m^2	$ft.^2$
Entrance/Lobby. Includes vestibule, circulation space from the vestibule to the reception desk, the circulation space in front of the reception desk, and all areas dedicated to waiting. This area must include circulation space that allows easy access of food carts from the kitchen, if required. [1]	11.15	120	16.72	180	37.16	400
Reception/Work Area. Generally includes space required for staff workers behind the reception counter and any circulation space leading to adjacent office space, to the isolation room and to the toilet. It does not include any space for general public. Includes the net space required to enclose any office equipment such as printers, faxes, copiers, computers, and video recording equipment, if any. It also includes general office work space (work tables or work surfaces).	26.01	280	35.30	380	48.31	520
Administration Offices. The required offices will vary both by Service and by Installation. Refer to Chapter 2, Administrative Offices, for Service contact names and more information. These ranges are rough estimates.	37.16 to 55.74	400 to 600	41.81 to 60.39	450 to 650	51.10 to 69.68	550 to 750
Isolation/Health Room[2]. Includes area for isolating and observing a sick child.	7.43	80	7.43	80	14.86	160
Isolation Toilet[2]. Includes area for use by children in isolation, handicapped adults, staff, and visitors in small centers	3.25	35	3.25	35	3.25	35

[1] **Service Exception:** Navy does not allow circulation space for food carts between the reception desk and the entrance to the facility. It is allowed in a hallway behind the reception area to pass from one wing of the building to another.
[2] **Service Exception:** Navy and USMC do not provide the Isolation/Health Room and the Isolation Toilet.

TABLE 2-3. SAMPLE PROGRAM SPACE REQUIREMENTS FOR STAFF SUPPORT

Functional Spaces	Standard Areas					
	Small CDC		Medium CDC		Large CDC	
	m^2	$ft.^2$	m^2	$ft.^2$	m^2	$ft.^2$
Break/Staff Room. Includes space for counter/cabinet space for microwave, sink and refrigerator, space for tables and chairs for staff. Provide closet or lockers for coats and jackets.	16.72	180	20.44	220	27.87	300
Training Room. Includes space for a conference room, resource bookshelves, etc.	23.22	250	32.52	350	41.81	450
Central Storage. Generally includes any space required for storage of both bulk and individual items for use within the Care Rooms and in the office area. Includes space to store any equipment such as Audio/Visual equipment that is rotated in the Care Rooms or used in training.	9.29	100	12.08	130	13.94	150
Staff/Public Toilet. This area must be sized based upon building code requirements (occupant load/occupancy) and shall be compliant with ADAAG.	11.15	120	18.58	200	26.01	280

TABLE 2-4. SAMPLE PROGRAM SPACE REQUIREMENTS FOR FACILITY SUPPORT

Functional Spaces	Standard Areas					
	Small CDC		Medium CDC		Large CDC	
	m^2	$ft.^2$	m^2	$ft.^2$	m^2	$ft.^2$
Kitchen. Includes space for all food preparation and dishwashing, as well as cart storage, dry goods storage, coolers and freezers, and work station for cooks.	65.03	700	83.61	900	102.2	1100
Janitorial. Includes all floor space required for storing janitorial supplies and equipment. Includes a mop sink. Large facilities may have more than one room	4.64	50	4.64	50	7.43	80
Laundry. Includes area required for washers and dryers, one dryer more than the number of washers and a sink and work surface for folding.	7.43	80	10.22	110	12.08	130
Other Facility Support. Generally calculated at a percentage of total building area, this includes building construction, mechanical rooms, and electrical rooms (see Chapter 3, Services, for more information). A rough percentage of total building area for these items would range from 20 to 25 percent; however, these spaces are inherently variable as a result of installation unique requirements. Consult with mechanical engineer and CDC Program Manager when programming these spaces.						

TABLE 2-5. CHILD ACTIVITY ROOM SPACE REQUIREMENTS

Age Group(s) Accommodated	Room Area	
	m^2	$ft.^2$
Infants and Pre-toddlers. This room can accommodate two groups of infants (eight children total) or two groups of pre-toddlers (10 children total).	78.8	840
Toddlers and Preschoolers. This room can accommodate two groups of toddlers (14 children total) or one group of Preschoolers (12 children total).	85.9	925
Preschoolers. This room can accommodate two groups of Preschoolers (24 children total).	131.5	1,415
Note: While the rooms are set-up to accommodate more than one age group in terms of space and facilities, usually two age groups will never share a room. See Chapter 2, Child Activity Rooms for more detailed breakdown of Child Activity Room spaces.		

2-3.3 Administrative Offices.

2-3.3.1 Quantity and Type.

The quantity and type of administrative offices are Service and facility specific. At a minimum, two offices are provided: One for the CDC director and one shared office. The shared office would accommodate the training and curriculum specialist and the FCC/CDH program (see Chapter 1, Functional Program Areas, for a description of these programs). Larger facilities and programs will provide separate and even multiple training/curriculum and FCC/CDH offices, as well as an assistant director's office, and administrator's office.

Additional design criteria for these offices are provided in Chapter 4. Do not program CDC office space types and sizes without first consulting with the Service contacts identified in Chapter 1, Regulatory Authorities:

2-3.3.2 Typical Sizes.

- Director's Office. Small at 9.3 m^2 (100 $ft.^2$) minimum; medium at 11.2 m^2 (120 $ft.^2$); and large at 13 m^2 (140 $ft.^2$).
- Administrator's Office. If provided as a separate office, 9.3 m^2 (100 $ft.^2$) minimum.
- Training and Curriculum Specialist. One to two offices at 9.3 m^2 (100 $ft.^2$) minimum.
- FCC/CDH Office. Variable by program and size.
- Resource And Referral Office. If provided as a separate office, 9.3 m2 (100 ft.2) minimum.

2-3.4 Child Activity Rooms.

Each CAR includes required subspaces. These subspaces and their space requirements are identified in Table 2-6. One of these subspaces is uninterrupted activity space (UAS). UAS is defined as space used exclusively for activity, excluding diaper changing, food preparation, toilets, storage areas, installed millwork, door swings, and dedicated circulation space. Dedicated circulation space is built into the area for each of the subspaces.

TABLE 2-6. CHILD ACTIVITY ROOM SPACE REQUIREMENT BREAKDOWN

Age Group(s) Accommodated	Room Area	
	m^2	$ft.^2$
Infants and Pre-toddlers. This room can accommodate two groups of infants (eight children total) or two groups of pre-toddlers (10 children total).	**78.8**	**840**
Uninterrupted activity space	48.31	520
One child toilet	1.86	20
Children's hand washing station	1.39	15
Food preparation, including sink	4.65	50
Diapering station, including sink and storage	4.65	50
Crib area	9.29	100
Cubby storage	2.32	25
General storage closet	5.57	60
Toddlers and Preschoolers. This room can accommodate two groups of toddlers (14 children total) or one group of Preschoolers (12 children total).	**86.0**	**925**
Uninterrupted activity space	58.53	630
Two child toilets	3.72	40
Two children's hand washing stations	2.79	30
Food preparation, including sink	4.65	50
Diapering station, including sink and storage	4.65	50
Cubby storage	6.04	65
General storage closet	5.57	60
Preschoolers. This room can accommodate two groups of Preschoolers (24 children total).	**131.4**	**1,415**
Uninterrupted activity space	100.3	1,080
Two toilets	3.72	40
Two children's hand washing stations	2.79	30
Food preparation, including sink	4.65	50
Diapering station, including sink and storage	4.65	50
Cubby storage	9.75	105
General storage closet	5.57	60

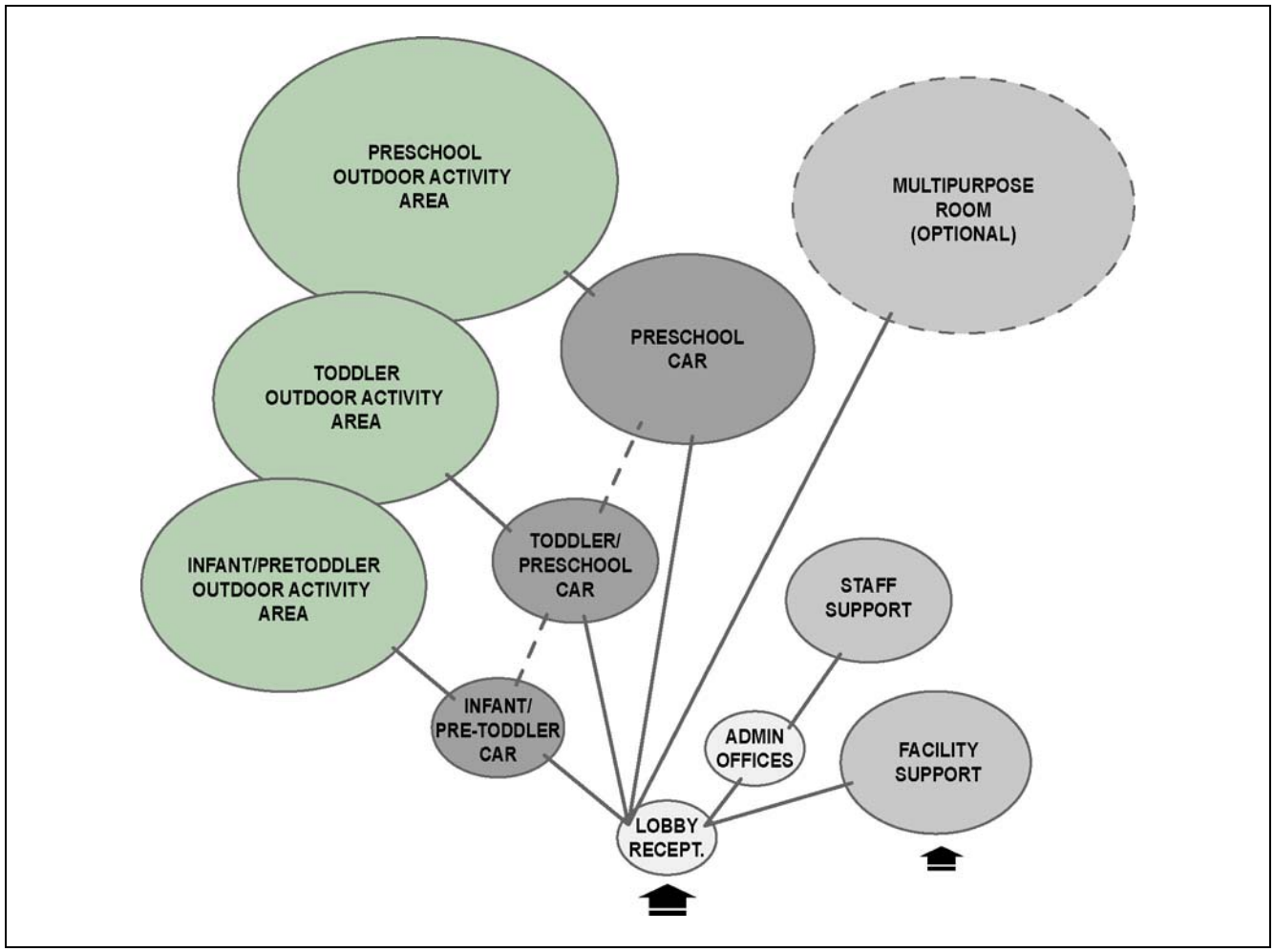
2-4 ORGANIZATION AND LAYOUT.

2-4.1 General Adjacencies.

2-4.1.1 Bubble diagram.

Figure 2-1, Functional Relationship Bubble Diagram, provides the general required adjacencies. The multipurpose room is optional.

FIGURE 2-1. FUNCTIONAL RELATIONSHIP BUBBLE DIAGRAM



2-4.1.2 Noise Level Zoning.

Zone the building in terms of noise levels so that activity rooms and/or spaces are grouped together and separated by distance and/or barriers from quiet rooms and/or spaces.

2-4.2 Non-standalone CDC External Adjacencies.

Locate CDCs on a first floor, at-grade level permitting exit discharge directly outside the building. CDCs are not permitted in basements. CDCs must not be located in a mixed occupancy with high hazard or storage occupancies. In any permitted mixed occupancy, CDCs must be separated from other occupancies by a minimum of 1-hour rated construction. Site selection must be approved by the contacts identified in Chapter 1, Reglatory Authorities.

2-4.3 Child Activity Room Adjacencies.

2-4.3.1 Building and Site Adjacencies.

Organize and group CARs by age group (infant, pre-toddler, toddler, and preschool). Arrange age groups nearest the next age group to simplify and possibly consolidate playground areas. In small centers, design to allow for future expansion and addition of CARs.

Locate CARs along the exterior perimeter of the building to provide direct egress from each activity room to an age-appropriate playground and to maximize natural light admission. Provide direct access to the central circulation system and locate close to common use spaces. Locate the infant/pre-toddler rooms closest to the reception/lobby area because the child is usually carried to the room, along with diaper bags and other supplies.

2-4.3.2 Internal Adjacencies.

Internal room adjacencies are driven by three key factors:

- **Visibility.** Do not create blind spots within the room. The caregivers should be able to see all areas of the room.
- **Maintain corners.** Preserve room corners for child activity areas. Do not locate the room entrances/exits near a corner.
- **Efficiency.** Fixed elements include child hand washing, toilets, food preparation, diaper changing, and art sinks in the toddler and preschool rooms. Group the fixed elements to share a plumbing wall or minimize piping runs.
- **Sanitation**. Physically separate the food preparation from the child hand washing/toilets and diaper changing.

2-5 ALTERATIONS TO EXISTING FACILITIES.

Except as modified here, design new CDCs and modernize existing facilities according to the design criteria established in this UFC. The objective of all modernization

projects is to meet new construction standards to the maximum extent possible within the programmed criteria.

2-5.1 Program.

For CDCs that will be located in existing, modernized facilities, the size and activity room distribution shall follow the criteria given in Chapter 2, Space Requirements and Chapter 4. Modify the standard CDC activity areas to accommodate the existing structure. However, send all proposed modifications to the standard criteria to the contacts defined in Chapter 1, Regulatory Authorities.

2-5.2 Design.

When modifying an existing building, analyze its potential with regard to location, site services, architecture, structure, internal environmental systems, and functional adaptability. Enhance its architectural character in accordance with the local base architectural compatibility standards.

CHAPTER 3 GENERAL DESIGN CRITERIA

3-1 GENERAL.

References within this UFC to applicable criteria and codes are intended to assist the designer in compiling the required statutes. These references are not intended to identify all those that may apply. It is the responsibility of the designer of record to identify and comply with all required statutes.

Use UFC 1-200-01, General Building Requirements for guidance on the use of model building codes for design and construction of DoD facilities.

3-1.1 Accessibility.

Provide barrier-free design in accordance with the requirements of the DEPSECDEF Memorandum “Access for People with Disabilities” dated Oct 31, 2008. The memorandum updates the DoD standards for making facilities accessible to people with disabilities. The US Access Board issued an update of the accessibility guidelines which the DEPSECDEF Memorandum implements with military unique requirements specified in the memorandum attachment. The new DoD, “ABA (Architectural Barriers Act) Accessibility Standard” and the DEPSECDEF Memorandum are located at http://www.access-board.gov/ada%2Daba/aba-standards-dod.cfm.

The specifications in DoD, “ABA (Architectural Barriers Act) Accessibility Standard”contain alternate specifications based on children's dimensions and anthropometrics for ages 3 and up (preschool age). This UFC contains alternate specifications for infants, pre-toddlers, and toddlers for drinking fountains/bubblers, water closets, toilet stalls, lavatories, sinks, and fixed or built-in seating and tables. Also note the following guidelines for children for the purpose of the CDC facility design:

- Infants, pre-toddlers, and toddlers are not considered to be self-mobile wheelchair users; they are assisted and transferred by caregivers.
- Preschool-age children are considered to be self-mobile wheelchair users.

3-1.2 Antiterrorism.

Design this facility in accordance with Unified Facilities Criteria (UFC) 4-010-01, DoD Minimum Antiterrorism Standards for Buildings. UFC 4-010-01 is a multidiscipline UFC therefore all architectural/engineering disciplines need to be aware of the requirements. Examples include, but are not limited to, the following:

- Civil engineers need to be aware that UFC 4-010-01 will affect site location of buildings, roadways, parking, access roads, and landscaping.

- Mechanical engineers need to be aware that UFC 4-010-01 will affect air intake design and location, utility routing, mail room ventilation, HVAC controls, HVAC equipment support, and the site location of chillers, compressors and other heavy equipment.

- Electrical engineers need to be aware that UFC 4-010-01 will affect HVAC controls, utility routing, electrical equipment support, mass notification, and site location of substations, transformers, generators, and other heavy equipment.

3-1.3 Sustainability.

Design and construct the facility to comply with UFC 4-030-01, Sustainable Development. The sustainable development policies for each Service are referenced in UFC 4-030-01 and provide the specific requirements that must be met.

3-1.4 Commissioning.

In addition to the building systems that are required to be commissioned per the latest version of U.S. Green Building Council (USGBC) LEED Rating System, the following additional systems or equipment require LEED Fundamental Commissioning as a minimum: all powered food service equipment and associated exhaust and fire protection systems.

3-2 STRUCTURE.

In addition to the criteria established in Section 3-1 of this document, refer to UFC 3-310-01, *Structural Load Data.* **Service Exception:** For Navy projects, comply with UFC 3-300-10N, *Structural Engineering.*

3-2.1 Foundation Insulation.

Since children spend a great deal of time on the floor, both temperature control and avoidance of drafts are very important. Maximum insulation of floors (depending on the project location), including perimeter insulation of floor slabs, is required.

3-3 ARCHITECTURE.

Service Exception: For Navy facilities, comply with UFC 3-100-10N, *Architecture.*

3-3.1 Stories.

New construction CDCs shall be single-story structures.

3-3.2 Exterior Design.

Design the exterior to comply with Command and Installation architectural standards. Also consider the local geographical and cultural environment. The CDC shall present a cohesive architectural image.

3-3.2.1 Architectural Style and Scale.

Design CDCs to reflect a residential, non-institutional character. For example, small-scale finish materials, such as bricks, are preferable to large pre-cast panels. The dimension of brick is more congruent with the size of a child and his or her home experience. Do not incorporate irregular geometry in the overall building design that results in any wall angle other than 90 degrees in the offices, activity rooms, or service areas.

For small and medium CDCs, contain the facility in one building. For large CDCs, multiple structures are permitted if site and budget allows and they are joined by an enclosed and covered walkway. In tropical areas these walkways need only be covered and not necessarily enclosed, but design the passageways to prohibit unauthorized access.

3-3.2.2 Entrance.

The perimeter of the building and outdoor activity areas shall have only one primary means of public access and egress. Control all other service and emergency egress points, with access limited to authorized individuals. Design the entry approach to be visible by inside staff. Incorporate a point of reference or landmark that serves as a welcome and a transition. Visually separate the primary entrance from other entrances and service areas. If budget allows, provide covered entry at the main entry that connects to a covered walkway to short-term parking to protect arriving children and parents from inclement weather.

In cold climates, provide a canopy or recess at required egress doors to ensure that doors can completely open without obstruction from snow and ice.

3-3.2.3 Roof.

Roofs shall be a simple gable or hip with minimal level changes or projections. Roof overhangs assist with reducing glare in children's activity rooms and should be coordinated with shade structures in the outdoor activity areas. See Chapter 5, Shade for more information on outdoor activity area shade structures.

3-3.2.4 Windows and Doors.

Windows and doors shall replicate a residential style and scale. Locate windows so that children have visual access to the outside. Recess or locate casement and other

projecting types of windows to be free from dangerous protrusions at child and adult heights.

Natural lighting is essential in CDCs. Provide throughout to the highest degree possible. In addition, it is desirable to have natural lighting coming from multiple directions.

3-3.2.4.1 **General Window Criteria.**

Construct, adapt or adjust all windows in areas used by children under 5 years of age to limit the exit opening accessible to children to less than 3.5 in. (90 mm), or be otherwise protected by guards that do not block outdoor light. Screen all openings used for ventilation. Use insulated glass for exterior window glazing.

Adhere to the following safety glass standards:

- Consumer Product Safety Commission, 16 CFR, Part 1201, Safety Standard for Architectural Glazing.
- ANSI Z97.1, Safety Performance Specifications and Methods of Testing for Safety Glazing Materials Used in Buildings.

3-3.2.4.2 **Child Activity Room Window Criteria.**

Provide child activity rooms with glass exterior walls from a maximum sill height of 11 in. (280 mm) above finished floor. Place the sill bottom on the finished floor for infant/pre-toddler rooms. Do not place sill heights between 3 and 10 in. (75 and 255 mm).

Comply with the following criteria:

- Up to 25 percent of the windows can be operable. Operable windows shall be above child height and have draft deflectors, screens, and safety locks.
- Locate or recess casement and other projecting types of windows or awnings to preclude dangerous protrusions at child and adult heights at both the interior and exterior.
- Any glass lower than 36 in. (915 mm) above the finished floor shall have safety guards or be constructed of safety-grade glass/polymer and shall have a vision strip. If cost permits, replace wire glass with an approved alternative.
- Sills shall be of durable material such as solid surface materials or plastic laminate. Sill edges and corners shall be rounded with a radius of.25-in. (6-mm) and shall project no more than .75 in. (20 mm) from the wall.

- If window seats are provided, they shall be between 10 and 12 in. (250 and 305 mm) above the finished floor and a minimum of 12 in. (305 mm) deep.

- Use overhangs or tinted glass to prevent glare in children's activity rooms. Avoid excessive or heavy tinting.

- If protruding 2 in. (50 mm) or more, do not locate horizontal window muntins (horizontal mullions) between 12 in. to 43 in. (305 mm and 1100 mm) above the finished floor because they could be used as climbing support.

- Provide light control and energy conservation features on all exterior windows, either by exterior or interior methods. In new construction, include exterior overhangs or low E-type glass, or both. If interior binds or shades are used for light control, provide child safety cords. Do not provide floor length draperies and vertical blinds in CARs.

3-3.2.5 Exterior Acoustics.

If environmental noise levels exceed the maximums provided in Chapter 2, Site Planning, provide the following acoustical treatments:

- Use acoustically laminate glass with a Sound Transmission Coefficient (STC) rating of 35 to 45, having an air space of 2 in. to 4 in. (50 mm to 100 mm) for all window and door glazing. (Conventional double-glazing and thermal glazing is not effective in this case.)

- Use high-quality commercial doors with a minimum STC rating of 30 for exterior doors.

- **Service Exception:** Air Force requires that if any exterior sound generation exceeds these figures, the design must include a multipurpose room or an internal covered atrium with playground surfacing.

3-3.3 Interior Design.

Design the interior spaces to dispel an institutional feeling, and use residential-style layouts, scales, and finishes. Ensure the interior design package is compatible throughout the facility and supportive of functional requirements. Ensure collaboration between interior designer, architect, and appropriate child development program personnel.

3-3.3.1 Interior Construction.

3-3.3.1.1 Corridors.

Main circulation corridors shall be a minimum of 6.5 ft. (1980 mm) wide and a maximum of 8 ft. (2440 mm) wide.

3-3.3.1.2 Interior Glass.

All interior glass must be tempered safety glass and mirrors must be constructed with break-resistant materials.

3-3.3.1.3 Doors.

Provide vision panels at adult and child viewing heights in all doors, including closets and storage rooms, except school-age or adult toilets. Vision panels shall be a minimum of 6 $ft.^2$ (.56 m^2) and placed so a person opening the door can see if children are sitting or standing in front of the door. **Service Exception:** The Navy and Marine Corps require a full-height vision panel in all closet, storage, and janitor closet room doors. These panels shall be 4 in. to 8 in. (100 mm to 200 mm) wide, a minimum of 6 in (150 mm) from the lock-side of the door, and extend vertically from 6 in. (150 mm) from the top of the door to 12 in. (305 mm) from the bottom of the door. The Navy and Marine Corps also require full-lite doors at all child activity rooms.

Comply with the following additional door criteria and the door hardware schedule in Table 3-1:

- Dutch doors are not permitted.
- Sliding glass doors are only allowed at the main entry and will be automated. If used, plainly mark the doors at both adult and child levels to prevent someone walking through the door by accident. Automated, sliding doors facilitate entry and exit of parents carrying children and supplies. Ensure the doors meet the Life Safety Code requirements for emergency and non-powered operation.
- Install finger-pinch protection devices wherever doors are accessible to children.
- Cover the hand contact and splash areas of doors and walls with a finish that is easily cleaned. Enamel paint is acceptable.

TABLE 3-1. HARDWARE SCHEDULE

	Main Building Entrances	Main Admin. Area	Child Activity Rooms Exterior Exits	Child Activity Rooms Interior Exits	Child Activity Rooms Interior Doors	Kitchen, Laundry, Janitor, Building Storage	Outdoor Storage
Passage Latch-set				✓	✓		
Storage Lock-set						✓	✓
Office Lock-set		✓					
Flush Panic Devices/ exterior lock cylinders	✓		✓				
Door Closers	✓	✓	✓	✓	✓	✓	
Door Hold-Open Devices			✓			✓	
Door Stops		✓	✓	✓	✓	✓	
Kick-Plates	✓		✓	✓	✓	✓	
Pinch Guards/Hinge Cups	✓		✓	✓	✓		✓

3-3.3.1.4 **Casework and Counters.**

Casework, counters, and cabinets shall be of high-quality and durable construction. Specify Architectural Woodwork Institute (AWI) Premium or Custom for finishes per AWI Quality Standards Illustrated, Current Edition. Casework, cabinet doors, and drawer faces should be provided as veneer panel core. Doors, drawers, and casework faces should be plastic laminate at a minimum. Where no water source is present, countertops should be plastic laminate as a minimum with hardwood or solid surface edging. Where a water source is present, countertops should be solid surface/solid composite plastics only. Specify .75-in. (20-mm) minimum thickness for plywood, plywood backing, and solid wood panels.

All counters throughout the facility shall have rounded safety corners with a .5-in. (12-mm) radius.

3-3.3.2 **Interior Finishes.**

See Chapter 4 for finish requirements in individual spaces.

3-3.3.2.1 **Color and Texture.**

Choose light to medium hues for large background areas and walls used for display. Do not use bright colors on walls, floors, and carpets/rugs in large quantities. Do not provide entire walls of graphics and designs that would compete with children's work or display materials. Do not use cartoon or fairy tale characters. Warm hues are preferred.

Do not use abrasive finishes such as stucco, knock-down finishes or high-relief tiles.

3-3.3.2.2 **Soft Floor Coverings.**

Floor coverings shall be impervious to bacteria, fungus growth, odor retention, and comply with fire and sanitation requirements. Do not select carpet with large patterned designs, for example, games or alphabets.

Comply with the following for all carpet and area rugs:

- Backings shall be anti-microbial of synthetic or inorganic material. For carpets, use direct glue type with an attached cushion/pad for additional life of the carpet and the cushion it adds for children falling. Ensure adhesive or binding components of the carpet do not emit toxic fumes.

- Fibers shall be stain and soil resistant 100 percent solution-dyed nylon. Minimum yarn face weight shall be 28 oz. Use heavy commercial wear classification carpet of level loop construction to minimize snagging.

- Ensure there are no tripping hazards at carpet/vinyl transition. Area Rugs shall be secured with a commercial-grade, two-sided carpet tape around the perimeter. Binding on rugs shall be heavy duty .375 in. to 1 in, (9.5 to 25 mm) wide.

- Use carpets tested for Volatile Organic Compounds (VOCs) and that bear a green label from the Carpet and Rug Institute indicating that the carpet emissions are within the acceptable range.

- Use products containing less than 0.05 parts per million (ppm) of formaldehyde. Any product purchased with formaldehyde levels above 0.05 ppm must bear a label in accordance with 29 CFR 1910.1048.

- **Service Exception:** Air Force requires all carpeting comply with the Air Force Carpet Standards as written in the most current Engineering Technical Letter (ETL). The most current ETL is located at the following Internet address: http://www.afcesa.af.mil/Publications/ETLs/default.html.

3-3.3.3 **Interior Acoustics.**

Design the facility to provide a comfortable acoustical environment and provide comprehensive sound isolation and sound absorption measures for individual spaces as appropriate. Provide acoustical design to prevent sound from noisy spaces such as corridors, toilets, and mechanical rooms from having negative impact on the adjacent spaces. Limit the reverberation time to 0.6-0.8 seconds. Design for less than 0.6 seconds in smaller spaces. Limit the ambient noise level from mechanical systems, outside noises, and adjacent spaces to 30-40 dBA. Do not allow mechanical peak noise level to exceed 85 dBA. Comply with the following:

- Extend all interior partitions to the structure above the ceiling. Partitions can be single layer gypsum wallboard but shall have cavity insulation and be completely caulked at the top and bottom of the partition.

- Provide acoustical baffles in all ductwork that penetrates partitions.

- Do not place electrical outlet boxes back-to-back.

At a minimum, provide the required sound transmission coefficient (STC) ratings identified in Chapter 4, Functional Data Sheets, for individual spaces. Use the "Suggested Design Values" STC ratings in UFC 3-450-01, Noise and Vibration Control as the basis for the sound design of partition, door and window assemblies. Utilize gypsum board wall "improvements" to increase the STC of gypsum board "Stud Type" partitions to achieve the project sound requirements. Unless indicated in Chapter 4, STC ratings do not need to be field verified.

3-4 SERVICES.

3-4.1 Plumbing.

Design domestic hot and cold water, sanitary and storm drainage, propane, fuel oil, or natural gas systems to meet the requirements of local Installation standards, and UFC 3-420-01, Plumbing Systems.

All floor drain traps shall be self priming.

3-4.2 Heating, Ventilating, and Air Conditioning (HVAC).

Design the HVAC system to meet the requirements of the most current edition of the International Mechanical Code (IMC); UFC 3-410-01FA, Heating, Ventilating, and Air Conditioning; and UFC 3-410-02A, Heating, Ventilating, and Air Conditioning (HVAC) Control Systems. **Service Exception:** For Navy projects, design the HVAC system to meet the requirements of UFC 3-400-10N, *Mechanical Engineering.*

3-4.3 Fire Protection and Life Safety.

Design fire protection and life safety to comply with UFC 3-600-01, *Fire Protection Engineering for Facilities.* **Service Exception:** For Navy projects, also comply with UFC 3-600-10N, *Fire Protection Engineering.*

The DoD CDC fire protection and life safety requirements exceed the minimum standards of the NFPA codes because the DoD ratio of children to child caregiver is greater than permitted in the NFPA codes. The additional features required in DoD facilities compensate for the reduced number of child caregivers.

3-4.3.1 **Exit Requirements.**

Comply with the following:

- Dead end corridors are not permitted.
- All doors in the egress paths shall be a minimum of 36 in. (915 mm) and provide a minimum clear width of 34 in. (865 mm).
- Equip all exit doors from the facility to the outside with flush type full-width push bar panic hardware that complies with Chapter 3, Accessibility. The contact or pressing surface must extend the full width of the door. This is to prevent snagging on evacuation cribs.
- Provide a direct exit to the outside from every child activity room.
- Equip every exit door from a child activity room to the outside with an automatic hold open device integral to the door or door closer. Flip down door stops are not permitted.
- Every exit door from a child activity room will permit immediate reentry from the outside at all times when the facility is being used.
- Design door thresholds and hardware to facilitate the exiting of an evacuation crib with up to four children pushed and/or pulled by a single adult.
- All exterior doors other than the main entrance, the kitchen exterior entrance, and any door that opens to a fenced area shall trigger a notification when opened to the reception desk to alert staff of unauthorized entry or exit.
- Exits shall have a maximum drop of .25 in. (6 mm) and be equipped with ramps with all-weather non-slip surface for emergency evacuation of wheeled evacuation cribs and wheelchairs. The maximum slope of the ramp shall be 1:12. The minimum width of the ramps shall be 44 in. (1020 mm). Turns and bends in the ramps shall be wider than the minimum. Provide ramps with any portion more than 12 in. (305 mm) above the adjacent grade with guard rails.
- Provide a smooth paved-surfaced evacuation route to a safe gathering area not less than 75 ft. (23 m) from the facility for all CARs. This route shall not cross any emergency vehicle access path, parking area or street, but the paved evacuation path shall connect to the sidewalk system and shall not dead end in grassed areas. The evacuation route shall be a minimum of 44 in. (1020 mm) wide; turns and bends in the route shall be wider to account for the turning radius of the evacuation cribs and

wheelchairs. Provide egress gates with a minimum of 44 in. (1020 mm) clear width in the outdoor activity area fences.

- Provide doors with not more than one latching/locking device operable with a single motion.

- Provide all closet doors with a latching mechanism that can be operated by children from the inside (i.e. hotel-style latching where operation of the inside door handle always opens the door but the door is always locked from the corridor or activity room side).

- Provide the door to the kitchen with a magnetic hold open device connected to the alarm system to allow movement of food carts into and out of the kitchen without chocking or blocking the door open.

3-4.3.2 Additional Exiting Requirements for Extreme Cold Weather Locations.

Extreme cold weather locations are those with more than 50 hours per year with a dry-bulb temperature below 5 degrees F (–15 degrees C) between the hours of 0900 and 1600. (Weather data for DoD is maintained by the Air Force Combat Climatology Center and may be accessed for all DoD locations at https://www2.afccc.af.mil/prodloc_mil/index.html). The file can be searched by installation or city name. Temperature data is found in the Table, Dry-Bulb Temperature Hours for an Average Year and is presented first by month and annual summary. From the summary under the column 0900 to 1600, total the hours. For example, the numbers in parenthesis are the hours in that temperature range for the following bases: Bangor, ME (40); Elmendorf AFB, AK (151); Minot, ND (244); Offutt AFB, NE (41); and Andrews AFB, MD (0). Weather data is also available at http://www.afccc.af.mil/ using the “Other Domain” link to submit a service request for the weather data. If a location meets the criteria for an "extreme cold weather location," comply with the following:

- Provide a two-hour area separation wall dividing the facility child activity areas roughly in half on either side of the wall. Locate the core administrative/support areas totally in one area or the other. Provide for horizontal exiting from one fire area to the other.

- Design corridor/room doors in the two-hour area separation wall to recess into the wall providing a smooth continuous wall surface. Install magnetic latches to hold door open, which release when the fire evacuation signal sounds. Install swinging doors that swing in opposite directions.

- Install magnetic latches to hold open other doors in the two-hour area separation wall that release when the fire evacuation signal sounds.

- Seal and fire stop all penetrations of the two-hour separation wall for conduit, piping, HVAC and electric service to maintain the fire rating of the wall.

3-4.3.3 **Emergency Lighting.**

Provide emergency lighting in all CARs, at the front desk area for desk attendant to make emergency calls and carry out other duties necessary for the safety and security of the children, and in all areas required by NFPA 101, , and. Whenever possible, incorporate the emergency lighting into the normally provided lighting fixtures.

3-4.3.4 **Fire Separation.**

Provide a one-hour fire resistive fire barrier around the laundry room.

3-4.3.5 **Fire Extinguisher Cabinets.**

Fire extinguisher cabinets shall be fully-recessed.

3-4.3.6 **Fire Suppression Systems.**

Provide complete automatic sprinkler systems in accordance with UFC 3-600-01, *Fire Protection Engineering for Facilities* and NFPA 13. Comply with the following criteria:

- Discharge inspectors' test connections to a safe, outside location onto a hard surface outside of areas where children play or congregate. Indicate location on drawings.
- Make fire department connection accessible without entering or transiting a children's play area or crossing a discharge path.
- Provide a wet chemical or water spray hood duct and cooking surface fire extinguishing system according to NFPA 96.

3-4.3.7 **Fire Detection and Alarm System.**

Provide an automatic fire detection and voice evacuation/mass notification system that complies with NFPA 72. Comply with the following additional requirements:

3-4.3.7.1 Locate the fire alarm control panel in an environmentally controlled location in the facility.

3-4.3.7.2 At a minimum, meet the following criteria for system circuits:

- Initiating circuits – Class B
- Notification circuits – Class A
- Signaling Circuits – Class B

3-4.3.7.3 Use fully addressable control panels with addressable detectors, supervisory sensors, pull stations, notification devices and other devices.

3-4.3.7.4 Do not use loud and jarring devices such as bells, horns, and klaxons, in child activity rooms as they can severely frighten young children causing them to hide or panic.

3-4.3.7.5 Provide manual pull stations inside the facility at each exterior exit door.

3-4.3.7.6 Provide smoke detection in all areas including closets over 20 $ft.^2$ (1.86 m^2) except the kitchen and spaces that are not climate controlled, such as the attic, walk-in coolers, and the mechanical equipment room.

3-4.3.7.7 Provide either a graphic or alphanumeric annunciator and remote handset at the front desk or main entrance vestibule.

3-4.4 Electrical Design.

Provide site electrical utilities, interior distribution systems, and communications and security according to UFC 3-500-10, *Electrical Engineering* (Draft) and the latest Installation design requirements.

- Site Electrical Utilities includes equipment, overhead power distribution, underground electrical systems, grounding, metering, and exterior site lighting.
- Interior distribution systems include service entrance and distribution equipment, TVSS, dry type transformers, wiring devices, raceways, conductors, interior lighting systems, emergency power systems, lightning protection systems, and systems furniture.
- Communications and security includes telecommunications systems, television systems, electronic security systems (ESS), and intercommunication systems.

In addition to the criteria identified above, comply with the following CDC-specific requirements:

3-4.4.1 Lighting.

See Chapter 4, Functional Data Sheets for light level and control requirements that are exceptions or in addition to the requirements referenced above.

3-4.4.2 Emergency Power.

Provide service entrance with external temporary emergency generator hook-up to power the entire facility load. Ensure availability of a hard surface area adjacent to the building service entrance to accommodate the generator. Ensure that this surface is outside of the outdoor activity area and does not impact other child-occupied areas or pathways.

3-4.4.3 **CCTV.**

Service Exception: For Navy and USMC projects provide the infrastructure for a CCTV system for child monitoring. The contacts provided in Chapter 1, Regulatory Authorities, will determine if design and construction funds will be provided for a complete and usable CCTV system. See Chapter 4, Functional Data Sheets for monitor and camera locations. Controls and recording equipment shall be located in a secure closet within the administration or staff support areas. Recorded image capacity is required for 30 days of images. [Need AF requirements.]

3-4.4.4 **Telecommunication Systems.**

See Chapter 4, Functional Data Sheets, for outlet locations.

3-4.4.5 **Television Systems.**

See Chapter 4, Functional Data Sheets, for outlet locations.

3-4.4.6 **Electronic Security Systems (ESS).**

See Chapter 4, Functional Data Sheets, for locations and additional criteria.

3-4.4.7 **Intercommunication Systems.**

See Chapter 4, Functional Data Sheets, for locations and additional criteria.

3-5 **FURNISHINGS.**

3-5.1 **General.**

Comply with following for furnishings in areas accessible to children:

- Furnishings shall have rounded corners or edges with a .5-in (12-mm) radius.
- Furnishings shall not splinter, or have toxic surfaces.
- Furnishings that are 36 in. (915 mm) or higher shall be secured to prevent tipping.
- Furnishings under 36 in. (915 mm) shall be easily moved by staff to help define activity areas (e.g., storage units, display space units, bookcases, puppet stages) and circulation paths.
- Choose furnishings and equipment that meet all applicable codes and standards and are age appropriate.

3-5.2 Tables and Chairs.

Specify comfortable, upholstered adult seating in the infant and toddler CARs to provide a place where caregivers can nurture children. Child-scaled seating includes upholstered or exposed frame chairs or carpeted constructed seating. To avoid suffocation, do not use beanbags, cushions and pillows for infants. Scale tables and chairs to the child. A minimum of one table per CAR shall be adjustable. Provide at least one table per toddler and preschool age group with appropriate knee clearance for children in wheel-chairs, 24 in. (600 mm) above the finished floor by 24 in. deep by 30 in. wide (600 by 750 mm). Provide so top surface height is a maximum of 2 in. (50 mm) higher than knee clearance. See Appendix B, Designing for Children, for more information on anthropometric dimensions.

3-6 SIGNAGE.

Identify the CDC as a "Child Development Center." Ensure that signage complies with Installation requirements. The installation or community name or graphical location of the facility may be used for public identification purposes (i.e. "____ Base Child Development Center"). Do not use terms such as "Nursery," "Child Care Center," or "Preschool" to designate a CDC. Do not use unique names, such as "Kiddie Kastle." Sign placement and type are site-specific issue, but signs shall be strategically located, adequately lit, and of sufficient size to permit proper viewing by individuals approaching the facility.

Interior signage shall have initial capitalization and horizontal text only.

3-7 SITE DESIGN.

Service Exception: For Navy projects, comply with UFC 3-200-10N, *Civil Engineering.*

3-7.1 Grading and Drainage.

Ensure that all areas have positive drainage. This is especially critical in outdoor play areas. If possible, accommodate both the building and outdoor activity areas without extensive grading and potential damage to the existing drainage run-off patterns. Water must be drained away from all play areas to ensure the areas are useable as quickly as possible after rain.

3-7.1.1 Minimum Slopes.

Position drainage slopes away from the building a minimum slope rate of 1:20, except in areas designated for the physically handicapped. Do not exceed a slope rate of 1:3 for banks for transition from one area to another. Use a minimum slope of 2 percent for grass areas.

3-7.1.2 Hydrologic Regime.

Prepare a grading plan that maintains the pre-development hydrologic regime to the extent possible. Limit disruption of natural water flows by minimizing storm water runoff, increasing on-site infiltration and reducing contaminants. Keep storm water on-site rather than dumping it to collection facilities. Rather than creating a large retention basin that could be a hazard, control storm water at the source by the use of micro-scale features that are distributed throughout the site. Do not locate retention or detention basins in the outdoor activity area. Integrate the landscape design into the storm water management strategy, creating planted areas that benefit from storm water while removing pollutants through natural processes.

3-7.1.3 Downspouts.

Locate above-grade downspouts outside the outdoor activity area and away from areas where children congregate. If this is not possible, connect downspouts to an underground drainage system. Design any elements of the downspouts or the drainage system located in the outdoor activity area to be free of sharp edges. Protect underground drainage systems from clogging. Provide a subsurface drainage system under all safety surfacing systems (including synthetic surfacing).

3-7.2 Walkways.

Connect the building to the public sidewalk system and to parking with pedestrian sidewalks. Comply with the following:

- The sidewalks shall be a minimum of 5 ft. (1525 mm) wide.
- Provide sidewalks immediately in front of or beside any designated parking areas to minimize the need for a child to walk behind a parked car to gain access to the building.
- Pedestrian approaches to the building shall not pass through any outdoor activity areas.
- Provide views of the outdoor activity areas from the main walk from the parking lot to the building entrance, considering a child's height and perspective

3-7.3 Parking/Vehicular Circulation.

Design the parking and vehicular circulation to meet UFC 3-210-02, *POV Site Circulation and Parking.* Also comply with the additional criteria and exceptions in this section. For planning purposes, allow 315 $ft.^2$ (29.3 m^2) of paving per car for circulation, parking, and drives, plus space for the drop-off. Gravel surfacing is not permitted.

Parents are required to walk the child inside the facility for drop-off and to meet the child inside the facility for pick-up. This drives the need for a significant quantity of parent parking close to the building. For safety, separate vehicular and pedestrian circulation. Provide parking and vehicular access for six [seven for AF?] different functions:

3-7.3.1 Bus Drop-Off/Pick-Up.

Not all CDC programs use buses. If required, locate the bus drop-off/pick-up directly adjacent to the main building entrance. Provide safe points of facility access for children and adults that are separate from the main vehicular circulation.

3-7.3.2 Parent and Visitor Parking.

Provide one space per 12 children accommodated by the facility. Support an increase in the parking allocation for patrons with the required site traffic impact study (See Chapter 2, Site Selection). Accommodate easy return to parking areas for circling. Provide a one-way traffic pattern with angled parking to improve traffic flow and limit back-up and turning maneuvers. Locate this parking as close to the CDC as possible and maximize the parking on the building-side of the drive to reduce the conflict between vehicles and children. Compact parking spaces (less than 9 ft. (2.7 m) wide) are not permitted in the parent and visitor lot. [per CNIC, have combined parent and visitor parking at 1 space per 12 (versus old 1:20 parent and 1:12 for visitors). Need to verify this with the other Services.]

3-7.3.3 Staff Parking.

Separate staff parking from parent/visitor parking. Locate staff parking near the building with a view to the entry. Provide parking spaces for the maximum number of staff on duty at one time. Staff parking can be configured for 90-degree parking.

3-7.3.4 Service Access.

Verify the size of required service vehicles and dumpster pad prior to planning and designing the service access areas. Provide a back-up spur for dead-end and service drives which exceed 100 ft. (30.5 m) in length. Screen or separate the service area from public use or traffic areas with fences, depressions, berms, and landscaping. Ensure proper drainage if depressions are used. Provide physical barriers to separate outdoor child areas from all service areas. Service access shall not cross outdoor activity areas.

Locate access near the serviced areas and consolidate service access when site and building layout allows. Provide a service vehicle apron. Four basic functions require service access:

- Occasional supply deliveries (furniture, laundry, books, toys).
- Regular food deliveries to the storage and kitchen area.

- Mechanical room related service (fuel deliveries, maintenance equipment).
- Regular garbage pick-up.

3-7.3.5 **Emergency Vehicle Access.**

Coordinate emergency vehicle access with the Installation fire protection. Personnel emergency egress routes/exit discharge paths shall not cross any vehicle access roads.

3-7.3.6 **Maintenance Vehicle Access.**

Coordinate maintenance vehicle access with the Installation engineer's office.

3-7.4 **Utilities.**

Transformers, mechanical equipment, and other above-grade utilities shall not be located within the outdoor activity area and shall be inaccessible to children. This includes storm drainage inlets, utility clean outs, valve covers, and manhole covers. These items shall be securable and accessible to only the installation's engineering staff.

3-7.5 **Radon.**

Check the EPA's Map of Radon Zones (by state), EPA 402-R-93-071 (available from http://www.epa.gov/), to determine the radon priority area. Also, check the results of the Navy radon survey by contacting the NAVFACENGCOM Engineering Field Division (EFD) or Engineering Field Activity (EFA) Air Pollution Engineer. Provide passive sub-slab depressurization systems for projects located in Priority Areas No. 1 (predicted average radon level is greater than 4/pCi/L). Change the system to active, if needed, based on follow-up testing. Check the following EPA documents available from the EPA Radon Information Center, (703) 356-5346:

- EPA's Model Standards and Techniques for Control of Radon in New Residences, U.S. Environmental Protection Agency, Air and Radiation (6604-J), EPA 402-R-94-009, March 1994.
- Radon Prevention in the Design and Construction of Schools and Other Large Buildings, EPA/625/R-92-016,
- Radon Measurement in Schools, EPA/402/R-92-014.

3-8 **LANDSCAPING.**

Landscaping is a critical component of a CDC and shall be coordinated with the outdoor activity area design. Landscaping shall reflect the local geographical environment, and selected plants shall be easy to maintain and enhance the visual quality of the facility in all seasons. Indigenous species are preferred. Comply with UFC 3-201-02, *Landscape Architecture* and the local Installation landscape standards. **Service Exception:** For

Air Force, also refer to the *USAF Landscape Design Guide* and any Major Command standards.

Three critical components of CDC landscaping require attention beyond that of most other facility types: Child safety, child learning opportunities, and durability.

3-8.1 Child Safety.

Plants with thorns are not permitted. Poisonous or toxic plants are not permitted. Plants that produce fruits, nuts, or seeds that represent choking hazards, regardless of toxicity, are not permitted. Verify the selected and existing plant material for meeting these requirements—the submittal section of specifications require written verification by the nursery contractor that plants with thorns, poisonous plants, toxic plants, or fruit bearing plants are not planted in the outdoor activity area. Refer to a comprehensive, commercially-available field guide for lists of poisonous plants. See Appendix C for non-comprehensive lists of common poisonous and non-poisonous plants.

Any fertilizers, herbicides and pesticides used in the outdoor activity area shall be organic and safe for children.

3-8.2 Child Learning Opportunities.

Provide a variety of plants with seasonal change, color, texture, fragrance, and interpretive value in the outdoor activity area to accommodate the programming requirements to provide learning opportunities for children.

Preserve natural landscape features, including existing topography, trees and vegetation. Supplement the natural features as needed to provide opportunities for children to explore different aspects of nature. Ensure that natural features such as hills and nature areas are accessible. Integrating plants into the entire play area is preferred over isolated nature areas. All areas of the outdoor activity area shall be visibly accessible to adult supervisors.

3-8.3 Durability.

Always use local, durable, native species to help ensure survivability. Children's play will inflict additional wear and damage to plants, especially in playgrounds; provide plantings that are resilient and of adequate size to withstand daily play.

3-8.4 Buffers.

Buffer play areas from traffic with earth berms at the site perimeter of 3 to 4 ft. (900 to 1200 mm) in height with a 3:1 slope. Also consider earth berms to screen parking and service areas. Higher berms at the site perimeter could be used to provide acoustical protection from a noise source, but the height and slope will be determined by the site and noise source specifics. To maintain supervision and safety, higher berms are only permitted on one side of the site.

In windy climates, use trees as natural windbreaks. In hot, sunny climates, use trees to supplement the required shade structures (see Chapter 5, Shade for more on shade requirements).

3-8.4 Building Entry.

Provide colorful flowering plantings that are visually interesting throughout the seasons to create a sense of welcome for the children at the main entry.

3-8.5 Irrigation.

Provide an irrigation system with sprinkler heads that do not present tripping or other safety hazards in the outdoor activity areas. Exposed or accessible elements of the sprinkler system shall not have openings between .38 in. (9 mm) and 1 in. (25mm) in size. Locate controls for the irrigation system in the mechanical room. Locate back-flow preventers, risers, and valves outside the outdoor activity area. An irrigation system for the non-activity area landscaped areas will be determined on a case-by-case basis for the specific installation and project budget.

CHAPTER 4 SPECIFIC DESIGN CRITERIA

4-1 INTRODUCTION.

This chapter identifies the specific design needs for each functional area as outlined in the space program in a standard Functional Data Sheet format. These Data Sheets are available as a Microsoft© Word© file for use during project execution. The file is downloadable from the Whole Building Design Guide Web site (www.wbdg.org) under the DoD page, Tools section.

The interior construction specialties, equipment and furnishings criteria provided in these tables are broken down as follows:

- Casework/Built-in Equipment. This includes anything physically attached or plumbed to the building such as counters, cabinets, casework, toilet accessories, window treatments, laundry machines, and retractable overhead screens.

- Furnishings, Fixtures, and Equipment (FF&E). This includes contractor-furnished, contractor-installed loose items such as desks, tables, chairs, bookshelves, and televisions (if mounted, TV mount would be built-in).

- User-provided FF&E. This includes all government-furnished, government-installed items, which are typically limited to office equipment such as computers, printers, copiers, and projectors (if mounted, projector mount would be built-in).

4-2 ADMINISTRATIVE, STAFF SUPPORT, AND FACILITY SUPPORT.

Tables 4-1 through 4-9 are the functional data sheets for the administrative, staff support and facility support spaces.

TABLE 4-1. ENTRANCE/LOBBY/CORRIDORS

Description/ Usage	The lobby serves as the primary entrance to the facility for parents, children and visitors, and it connects all the primary circulation pathways of the facility. Parents will escort children to the activity rooms. A waiting area is included.
Ceiling Ht.	10 ft. (3.05 m) minimum; 12 ft. (3.7 m) maximum.
Finishes	**Walls.** Lobby. Provide a low-maintenance, durable finish with a wainscot. Consider painted gypsum wallboard or the use of vinyl wall covering where budget and practical considerations allow. **Service Exception:** Navy does not permit vinyl wall covering. Corridors. Provide a low-maintenance, durable finish with a wainscot. Consider painted gypsum wallboard **Floor.** Lobby. Provide a low-maintenance, durable, moisture and slip-resistant finish suitable for this high traffic area. Options include resilient tile, sheet vinyl, stained concrete, stone, or terrazzo. **Service Exception:** AF Allows carpet. Provide a walk-off mat/area at the entrance door. Provide a base that matches the flooring or a vinyl base. Corridors. Sheet vinyl or VCT. **Service Exception:** AF and USMC allow carpet. **Ceiling.** Lobby. Painted gypsum wallboard or ACP. Corridors. ACP
Plumbing	Corridors: Provide an electric water cooler near the lobby and public toilets.
HVAC	Provide system per Chapter 3, HVAC.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide power per Chapter 3, Electrical. In addition, provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** Provide outlets to cover the entrance and the interior. All monitors shall be viewable from the entrance and lobby. **CATV/Internal Video.** Provide a CATV outlet. **Intercom.** None required. **Telephone.** Provide one outlet in the waiting area. **Data.** Provide an outlet in the waiting area.
Security	Ensure visibility on the entrance from the reception/work area. Any additional security equipment shall have a non-threatening appearance.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics.
Casework/ Built-in Equipment	Lobby. Provide a means to display facility information and children's artwork. Corridors. Provide a means to display children's artwork. Provide parent-teacher boards at the entries to the CARs.
Furnishings Fixtures & Equip. (FF&E)	Floor mat at entrance. Waiting area includes durable, easy-to-clean, and moisture-resistant furniture; tables; magazine and brochure rack; wall art; and a wall clock.
User-provided FF&E	CCTV cameras per the outlet count and monitors.

TABLE 4-1. ENTRANCE/LOBBY/CORRIDORS

Special Req.	Provide an airlock at the main entrance. Exterior doors shall accommodate adult- and child-height views from both sides. The waiting area shall include an area to store child safety seats. Provide a grated snow-trap for northern tier bases. Provide a means to visually reduce the length of the longer corridors, e.g. varied wall, ceiling and floor finishes, patterns, and design. If possible, allow children in the lobby/waiting area to see into some of the activity rooms.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-2. RECEPTION/WORK AREA

Description/ Usage	The reception desk is the focal point of information exchange within the building and is the check-in location for patrons. It is also the working surface for the receptionist/desk attendant. The work area includes shared office equipment and general work space.
Ceiling Ht.	9 ft. (2.74 m) minimum. 12 ft. (3.7m) maximum.
Finishes	**Walls.** Painted gypsum wallboard. Consider vinyl wall coverings. **Service Exception:** Navy does not permit vinyl wall coverings. **Floor.** In front of counter: Provide a low-maintenance, durable, moisture and slip-resistant finish suitable for this high traffic area. Options include resilient tile, sheet vinyl, linoleum sheet, vinyl plank flooring, stained concrete, stone, or terrazzo. **Service Exception:** AF Allows carpet. Provide a base that matches the flooring or a vinyl base. Behind counter and work area: Can match the lobby, or vinyl composition tile (VCT) and carpet are also permitted for all Services. Provide vinyl base. **Ceiling.** Match lobby ceiling or provide Acoustical Ceiling Panels (ACP). Consider using the ceiling to define and separate this area from the Lobby, i.e., a dropped gypsum board soffit over the reception desk and gypsum board false beams.
Plumbing	None required.
HVAC	Provide system per Chapter 3, HVAC.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide power per Chapter 3, Electrical. In addition, perform a power requirement survey as this area's power requirements are extremely site- and locale-specific.
Lighting	Provide system per Chapter 3, Lighting.
Communication	**CCTV.** All monitors shall be viewable from this area. Also see Special Requirements. **CATV/Internal Video.** None required. **Intercom.** Provide the master controls for the facility internal two-way system. **Telephone.** Provide outlets for the required number of phones and facsimile machines. **Data.** Provide outlets for the required equipment.
Security	If a security system is provided, place the controls and a duress alarm accessible to the receptionist/desk attendant.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics.
Casework/ Built-in Equipment	Provide a 24-in.- (610-mm-) deep dual-height transaction counter that accommodates a minimum of one person in a wheelchair, a minimum of three standing adult patrons for small facilities, and six standing adult patrons at large facilities. Ensure that a child can see the receptionist/desk attendant behind the counter. The counter shall be dual height for standing transactions, seated office functions. The ADA-height counter shall have knee-hole space on both sides of the counter. The counter shall be a durable solid surface material such as granite, concrete, or solid plastic—laminate is not permitted. Modesty panels and apron shall also be of durable materials. Consider supports such as steel angle braces for counters with knee-hole space. Consider providing wall and base cabinets and an equipment counter.
Furnishings Fixtures & Equip. (FF&E)	Reception desk chairs and patron stools.
User-provided FF&E	Point of sale equipment. Office equipment, including computers, printers, copiers, scanner, facsimile machine. CCTV monitors.

TABLE 4-2. RECEPTION/WORK AREA

Special Req.	The receptionist/desk attendant shall have direct line-of-sight visual control over the main entrance and the CCTV monitors. Place the monitors so the seated attendant does not have to turn more than 90 degrees from his or her normal working position to view the monitors. Coordinate the location of the monitors and the overall design of the area, including the lobby, with the monitor equipment selection to ensure appropriate viewing angles and distance.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-3 ADMINISTRATIVE OFFICES

Description/ Usage	The required offices will vary both by Service and Installation. Refer to Chapter 1, Scope of Facility, and Chapter 2, Space Program, for additional guidance and Service contacts. Locate offices as close to lobby/reception area as possible.
Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	**Walls.** Painted gypsum wall board or vinyl wall covering. **Floor.** Carpet with vinyl base **Ceiling.** ACP
Plumbing	None required.
HVAC	Provide system per Chapter 3, HVAC.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide power per Chapter 3, Electrical.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** Provide an outlet for a single CCTV monitor in the Director's office. **CATV/Internal Video:** None required. **Intercom.** Provide a system remote in each enclosed space. **Telephone.** Provide one line per staff plus one additional line for fax and copier. **Data.** Provide one outlet per staff plus one outlet for each printer, copier, scanner, etc.
Security	Provide vision panel in all doors per Chapter 3, Interior Construction.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics, and provide partition and door construction with a minimum STC rating of 45.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Private Offices: desk, credenza, filing cabinet, desk chair, and two side chairs. Workstations: desk chair and side chair for open offices. Workstation systems furniture must provide adequate space for filing and overhead storage. Provide dry-erase boards in select offices and workstations. The Training and Curriculum office requires a lockable, four-drawer lateral file cabinet.
User-provided FF&E	Office equipment, including computers, printers, copiers, scanner, facsimile machine, and CCTV monitor (in Director's office).
Special Requirements	If possible, locate offices on exterior wall and provide windows for natural light admission. Provide direct line of sight from the director's office to the lobby/reception. If possible, provide direct line of sight from the FCC/CDH office to the lobby reception. The Training and Curriculum Specialist office shall be buffered visually and acoustically from the public areas and the CARs. Near or adjacent to the administrative offices, provide a telecom room in compliance with Chapter 3, Electrical The following offices require a 6 $ft.^2$ (0.56 m^2) lockable storage closet: Director, Administrator, and Resource and Referral.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-4. BREAK/STAFF ROOM

Description/ Usage	This space is used for staff breaks, meals and storage of belongings. It should be located adjacent to the staff/public toilet and the Training and Curriculum office, and should be buffered visually and acoustically from the public areas and CARs.
Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	**Walls.** Painted gypsum wall board or vinyl wall covering. **Floor.** Carpet or VCT with vinyl base. Provide VCT at sink area. **Ceiling.** ACP
Plumbing	Provide a sink. Consider a connection for refrigerator ice maker.
HVAC	Provide system per Chapter 3, HVAC.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide system per Chapter 3, Electrical.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** None required. **CATV/Internal Video.** Provide one outlet. **Intercom.** Provide a system remote. **Telephone.** Provide one line. **Data.** Provide a dedicated outlet for the time clock and at least one additional outlet.
Security	Provide vision panel in all doors per Chapter 3, Interior Construction.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics.
Casework/ Built-in Equipment	Provide solid-surface countertops with lockable wall and base cabinets. Provide bulletin board with tack surface, coffee machine, and wall clock.
Furnishings Fixtures & Equipment (FF&E)	Tables, chairs, microwave, refrigerator, television, and time clock.
User-provided FF&E	Telephone.
Special Requirements	If possible, locate break room on exterior wall and provide windows for natural light admission.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-5. TRAINING ROOM

Description/ Usage	The Training Room provides space for staff work, development of program materials, and utilization for staff training library and resources. It should be located adjacent to the staff/public toilet and the Training and Curriculum office, and should be buffered visually and acoustically from the public areas and CARs.
Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	**Walls.** Painted gypsum wall board or vinyl wall covering. **Floor.** Carpet or VCT with vinyl base. **Ceiling.** ACP
Plumbing	None required.
HVAC	Provide system per Chapter 3, HVAC.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide system per Chapter 3, Electrical.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** None required. **CATV/Internal Video.** Provide one outlet. **Intercom.** Provide system remote. **Telephone.** Provide one line. **Data.** Provide outlets as required for equipment.
Security	Provide a keyed lock set for the door. Design the door to be opened from the inside without the key. Provide vision panel in all doors per Chapter 3, Interior Construction.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics, and provide partition and door construction with a minimum STC rating of 45.
Casework/ Built-in Equipment	Countertop with wall and base cabinets. Provide a storage closet for training materials and AV cart. Provide an electrically operated retractable screen, a built-in computer projector mount, bulletin board with tack surface, and dry-erase board.
Furnishings Fixtures & Equipment (FF&E)	Provide TV, VCR, and DVD player, Provide conference/work tables and chairs as follows: **Service Exception:** Air Force. 100 percent of staff in small facilities, 50 percent in medium facilities, and 30 percent in large facilities. **Service Exception:** Navy and Marine Corps. 50 percent of staff in all facilities.
User-provided FF&E	Computer projector, printers
Special Requirements	
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-6. CENTRAL STORAGE

Description/ Usage	The separate central storage room provides space for shared program materials, audiovisual equipment, and other resource materials. It is located near staff/administrative areas.
Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	**Walls.** Painted gypsum wall board. **Floor.** VCT with vinyl base. **Ceiling.** ACP
Plumbing	None required.
HVAC	Provide system per Chapter 3, HVAC.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide system per Chapter 3, Electrical.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** None required. **CATV/Internal Video.** None required. **Intercom.** Provide system remote. **Telephone.** Provide one line. **Data.** Provide one outlet.
Security	Provide a keyed lock set for the door. Design the door to be opened from the inside without the key. Provide vision panel in all doors per Chapter 3, Interior Construction.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics.
Casework/ Built-in Equipment	Provide a combination of low open shelving, baskets, drawers, cabinets with doors, boxes, chests, hooks that do not present a hazard, adult-height shelves, wall-hung cabinets, storage bags, buckets, crates and bins.
Furnishings Fixtures & Equipment (FF&E)	See Casework/Built-in Equipment.
User-provided FF&E	None required.
Special Requirements	Keep the top 18 in. (460 mm) from the ceiling clear for sprinkler operation.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-7. STAFF/PUBLIC TOILETS/JANITOR'S CLOSET

Description/ Usage	ADA-compliant facilities located near the lobby and staff areas. In small CDCs, combine public and staff toilets. In medium and large facilities, provide separate public and staff toilets. Minimum requirements are as follows: Small CDCs - two unisex staff/public toilets. Medium CDCs - one unisex public and two unisex staff toilets. Large CDCs - one unisex public and three unisex staff toilets.
Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	**Walls.** Epoxy or semi-gloss or better latex, mold-resistant gypsum wall board with a ceramic tile wainscot. Consider full ceramic tile walls with integral patterns. Use a dark-colored epoxy grout. **Floor.** Ceramic tile with integral patterns. Use a dark-colored epoxy grout. **Ceiling.** Epoxy or semi-gloss or better, water-resistant gypsum board. None needed for janitor's closet.
Plumbing	Provide wall-hung water closets and lavatories. Provide a floor drain. Provide a keyed hose bibb.
HVAC	Provide system per Chapter 3, HVAC. In addition, provide a minimum of eight air changes per hour and negative pressure.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide system per Chapter 3, Electrical.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** None required. **CATV/Internal Video.** None required. **Intercom.** None required. **Telephone.** None required. **Data.** None required.
Security	Any staff or public toilet that is not directly visible from the reception desk shall require keyed entry.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics.
Casework/ Built-in Equipment	Solid-surface countertop with either underhung or integral sink. Mirror. Toilet accessories: toilet paper dispensers, paper towel dispenser with integral trash receptacle, robe hooks, grab bars, sanitary napkin disposal, seat cover dispensers, and soap dispensers. Fold-down diaper changing table/station.
Furnishings Fixtures & Equip. (FF&E)	None required.
User-provided FF&E	None required.
Special Req.	Provide a Janitor's closet associated with or in proximity of these toilets. This closet includes a floor mop sink with hot and cold water and a hose connection, a floor drain, and storage for pails, mops, vacuums, and related cleaning supplies and equipment. Include an outward-swinging, lockable door with a vision panel per Chapter 3, Interior Construction, that can be opened from the inside without a key. Provide lockable cabinets for cleaning supplies. Provide exhaust ventilation directly to the outside. The lights in the janitor's closet shall be controlled automatically to remain on during facility operating hours.
For use during project execution by the appropriate Service agency	
Occupancy	Staff.

	Customers.
Min. net m^2 (ft^2)	

TABLE 4-8. KITCHEN

Description/ Usage	CDC kitchens support food preparation, food and supply storage, delivery of snacks or meals to CARs, sanitation (washing of dishes, utensils, pots, pans, etc.), and storage of food service equipment, flatware, and dishes. Locate kitchen adjacent to an exterior wall and the service area. It requires a direct service entrance from the outside that does not cross any outdoor areas. Provide direct pathways from the kitchen to the CARs that do not pass through the lobby or other functional areas for food cart transport.
Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	**Walls.** Epoxy or semi-gloss or better latex painted mold-resistant gypsum wall board. Food prep areas will have ceramic tile with dark-colored epoxy grout or stainless steel wall finish. The walls shall be impact resistant up to 48 in. (1220 mm) from finished floor. **Floor.** Quarry tile with epoxy grout or liquid applied flooring designed for commercial kitchens. **Ceiling.** High humidity-rated, ceramic-faced ACP..
Plumbing	Provide hand-washing sinks at each entrance; a two-compartment food preparation sink; a three-compartment, deep dishwashing sink with a gooseneck faucet and hot water booster to 180 F (82 C); and to the heavy-duty, commercial-grade dishwasher. Provide connections for the coffee and ice makers. Provide a floor drain. **Service Exception:** Navy does not permit ice makers. CDC kitchens will typically use grease interceptors in lieu of central grease traps to service individual equipment. Locate them to be easily accessible for cleaning, be located outside of food preparation areas, and not project above the floor in open walkways or work areas. Exposed covers shall be rust-proof and skid resistant. If central grease traps are provided, locate them outside the building in a service area inaccessible to children.
HVAC	Provide system per Chapter 3, HVAC.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide system per Chapter 3, Electrical. In addition, perform a power requirement survey as this area's power requirements are extremely site- and locale-specific. Provide a dedicated electrical circuit for the cold storage.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** None required. **CATV/Internal Video.** None required. **Intercom.** Provide a system remote. **Telephone.** Provide one line. **Data.** Provide one outlet.
Security	Provide lockable storage for dry food storage and hazardous materials. Provide a keyed lock set and vision panel in all doors per Chapter 3, Interior Construction.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics.
Casework/ Built-in Equipment	Provide minimum 24-in.- (610 mm-) deep stainless steel countertop and metal cabinets and wire shelves for food, utensil, equipment and supply storage. See Appendix D for sample equipment lists.
Furnishings Fixtures & Equipment (FF&E)	See Appendix D for sample equipment lists. Provide one stainless steel food cart for every CAR and space in the kitchen to store them. Provide a small office area with desk, chair, and file storage for food and supply orders
User-provided FF&E	See Appendix D for sample equipment lists. Computer, printer, and phone for office area.

TABLE 4-8. KITCHEN

Special Requirements	Provide air curtains or air locks on the exterior doors. Deep-fat fryers are not permitted. See Appendix E for sample layouts. Comply with *USDA Program Aid Food Service Equipment Guide for Child Care Institutions.* Include a food service specialist on the design team that is a member of the Foodservice Consultant Society.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-9. LAUNDRY.

Description/ Usage	The laundry room shall be accessible only to adults. Locate it near the infant/pre-toddler CARs and an exterior wall.
Ceiling Ht.	9 ft. (2.74 m) minimum.
Finishes	**Walls.** Epoxy painted CMU or water-resistant gypsum wallboard. Provide rub rails and metal/high-impact plastic corner guards. **Floor.** Sealed concrete, VCT, or seamless vinyl. **Ceiling.** None or ACP. Provide washable and humidity resistant panels.
Plumbing	Provide connections to each of the washing machines and one single-compartment laundry tub. Provide floor drains. Provide recessed plumbing cabinets for each utility connection to the machines.
HVAC	Provide system per Chapter 3, HVAC. In addition, provide a minimum of six air changes per hour, 50 to 60% relative humidity, and negative pressure. Do not vent the dryer exhaust near a building entrance.
Fire Protection	Provide system per Chapter 3, Fire Protection. Note requirement for one-hour rated construction and 45-minute-rated door with self closer.
Power	Provide system per Chapter 3, Electrical. In addition, provide power disconnects for the washers.
Lighting	Provide system per Chapter 3, Electrical.
Communication	**CCTV.** None required. **CATV/Internal Video.** None required. **Intercom.** Provide system remote. **Telephone.** None required. **Data.** None required.
Security	Provide a keyed lock set for the door. Design the door to be opened from the inside without the key. Provide vision panel in all doors per Chapter 3, Interior Construction.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics, and provide partition and door construction with a minimum STC rating of 52.
Casework/ Built-in Equipment	Provide large, heavy-duty, front-loading residential washers and dryers: • Small. One washer and two dryers. • Medium and Large. Two washers and three dryers. Washers and dryers shall not be stacked. Provide a built-in folding table and shelves for storage.
Furnishings Fixtures & Equip. (FF&E)	Covered metal containers for soiled laundry.
User-provided FF&E	None required.
Special Req.	Provide easy access to rear of dryers to allow easy maintenance and cleaning of vents (see HVAC). Coordinate door openings and dimensions with room layout and equipment sizes, e.g., laundry carts, washers, dryers, and ice machines. Provide acoustical measures to control the noise/vibration of the washers and dryers. The laundry room should not be visible from the lobby area.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

4-3 CHILD ACTIVITY AREAS.

Tables 4-10 through 4-23 provide the criteria for the CARs and their subspaces. Table 4-24 provides the criteria for the optional multipurpose room. Criteria for the outdoor activity areas are provided in Chapter 5.

TABLE 4-10. CHILD ACTIVITY ROOMS

Description/ Usage	Provides age-appropriate child activity areas and functional support spaces in a self-contained environment. These rooms are sized per Chapter 2, Child Activity Rooms. Activities include developmental, play, eating, sleeping, and all other activities pertaining to a child's care. See special requirements for age-specific design considerations. See Tables 4-11 through 4-23 for subspaces of the CARs.
Ceiling Ht.	8 ft. (2.44 m) minimum; 9 ft. (2.74 m) maximum.
Finishes	**Walls.** Vinyl wall covering or other hard, durable, easily-cleaned surface up to 48 in above finished floor. Painted gypsum wall board above. Provide continuous vinyl chair rail bumpers at the transition point. Provide heavy vinyl bumpers on all corners. **Service Exception:** Navy requires epoxy painted impact resistant gypsum wall board up to 48 in (1220 mm) above finished floor. **Floor.** Seamless sheet vinyl or linoleum sheet with vinyl base and carpeting in portions of the uninterrupted activity areas. See Tables 4-11 through 4-23 for flooring requirements for specific subspaces. **Service Exception:** The Navy does not permit carpeting. **Ceiling.** ACP
Plumbing	None required. See Tables 4-11 through 4-23 for subspace plumbing requirements.
HVAC	Provide system per Chapter 3, HVAC. In addition, maintain 35 to 50% humidity, provide exhaust at 5 cfm/person, and maintain 68°F (20°C) minimum and 78°F (26°C) maximum. Monitor temperature within 12 in. (305 mm) of the finished floor by means of a remote mounted bi-metallic thermometer. Provide uniform air velocities of no more than 30 ft. (9.14 m) per minute 12 in. (305 mm) from the floor in all child activity spaces, unless otherwise noted. Provide individual room control and locate thermostats 54 in. (1370 mm) above the floor. Incorporate night and weekend setback capability. Use room thermostats that adjust accordingly to maintain the appropriate temperature as measured by the bi-metallic thermometer. Locate or protect heating surfaces to ensure children cannon come in contact with surfaces above 110°F (43°C). Do not specify equipment that interrupts continuous and flat wall space at child levels that could accommodate perimeter activity areas. In climate zones 3 through 8 provide a supplemental, under-floor, hydronic radiant heating system in infant and pre-toddler CARs. Provide under floor slab R-10 insulation for climate zones 3 through 7 and R-15 insulation for climate zone 8.
Fire Protection	Provide system per Chapter 3, Fire Protection. In addition, provide exit signs at the exterior exit door. **Service Exception:** The Air Force does not require exit signs in the individual child activity rooms. See Special Requirements below for additional exit requirements if a vestibule is provided at the exterior door.
Power	Provide system per Chapter 3, Electrical. In addition, provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Lighting	Provide system per Chapter 3, Electrical. As an exception, variable dimming switches are not permitted.

TABLE 4-10. CHILD ACTIVITY ROOMS

Communication	**CCTV.** Provide a minimum of two outlets and ensure full coverage **CATV/Internal Video.** Provide one outlet. **Intercom.** Provide system remote with a handset for private conversations. **Telephone.** None required. **Data.** Provide outlets as required for equipment.
Security	Provide vision panel in all doors per Chapter 3, Interior Construction. **Service Exception:** The Navy and Marine Corps require full-lite doors at all child activity rooms.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics, and provide partition and door construction with a minimum STC rating of 52. The CAR's anticipated peak noise level is 70-80 dBA. The preferred sound level is 35-40 dBA, maintained for at least 80 percent of the time.
Casework/ Built-in Equipment	**Cubby Storage Area.** Provide pre-manufactured, compartmentalized, open-front cubbies anchored to the floor and/or wall. Ensure that clothing stored in each individual cubby can be separate from and will not come in contact with clothing stored in other cubbies. Provide 36 in. (915 mm) of clear space directly in front of cubbies. • Infant/Pre-toddler. Provide 10 individual 12-in.-wide, 18-in.-high, and 15-in.-deep (305-mm x 455-mm x 380-mm) cubbie compartments. • Toddler/Preschooler. Provide 14 individual 12-in.-wide, 48-in.-high, and 15-in.-deep (305-mm x 1,220-mm x 380-mm) cubbie compartments. Provide two safety hooks in each cubbie. Provide a 10-in-high (255-mm) bench for child use. • Preschooler. Provide 24 individual 12-in.-wide, 48-in.-high, and 15-in.-deep (305-mm x 1,220-mm x 380-mm) cubbie compartments. Provide two safety hooks in each cubbie. Provide a 10-in-high (255-mm) bench for child use. **Other.** Provide childproof latches or magnetic locks to any storage cabinets within a child's reach. • Infant/Pre-toddler. Provide a minimum of 60 in. (1525 mm) linear length of 1- to 1.2-in.- (25- to 30-mm-) diameter grab bars with rounded corners at 18 in. (455 mm) above finished floor level to aid infants to pull to standing position. Provide a shatter-proof mirror with safety edges. Locate the bottom edge at finished floor and the top at a minimum of 30 in. (760 mm) above finished floor.
Furnishings Fixtures & Equipment (FF&E)	See Appendix D for more information on FF&E. **Infant/Pre-toddler.** Cribs used for sleeping and emergency evacuation. Cribs shall be of durable construction, be narrow enough to pass through a door with a 34 in. (865 mm) clear opening, and have sturdy caster wheels approximately 4 in. (100 mm) in diameter. The evacuation crib shall be able to support and transport a minimum of five 18-month-old children weighing a total of 120 lbs. (55 kg). **Service Exception:** The Air Force requires 25 $ft.^2$ (2.32 m^2) of storage for "bye-bye" buggies (large, multi-child strollers) near each infant/pre-toddler CAR. This can be a niche in the hallway outside the room.
User-provided FF&E	See Appendix D for more information on user-provided FF&E.

TABLE 4-10. CHILD ACTIVITY ROOMS

Special Requirements	**Room Design.** The ideal room width to length ratio is 3:2. Do not create blind spots in the room and ensure that caregivers have full visual access over all areas of the room. Color-coding can be used to differentiate spaces for each age group or activity room. **Glazing.** Provide interior windows from activity rooms to corridors at 42 in. (1070 mm) above finished floor, a minimum of 36 in. (915 mm) high, and a minimum of 10 ft.^{2} (.93 m^2) total window area (no horizontal members blocking view of either adults or children). See Chapter 3, Windows and Doors, for exterior window requirements. **Doors, hardware, other construction.** Do not use folding or sliding partitions or doors. Provide finger guards on the hinge edge of both the interior and exterior sides of all activity room doors up to 60 in. (1520 mm) minimum above finished floor. Install closer on all exterior child activity room doors to restrict the rate of closure. In cold climates, provide a vestibule at the exterior exit. One vestibule can serve two rooms. If a vestibule is provided, use a non-latching type door held closed by a hydraulic door closer for the inside door. Install panic egress hardware only on the exterior door. **Interior construction.** Construct a partitioned, lockable general storage closet sized per Chapter 2, Child Activity Rooms, that can be opened from the inside without the key. The closet door shall have a vision panel per Chapter 3, Interior Construction. Provide adjustable shelving in the closet. Demountable and retractable partitions are not permitted in the CAR. **Infant/Pre-toddler.** Cribs shall be directly observable by caregivers. Indicate location on plans of all major equipment using dotted lines to ensure proper fit and clearances. **Toddler/Preschooler.** Provide wider pathways to and within uninterrupted activity space to activity accommodate increased mobility. **Preschooler.** The uninterrupted activity space shall be a large, open, flexible area that allows unrestricted movement.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-11. CAR TOILETS

Description/ Usage	Provides age-appropriate toilet for children only. Where information is not provided in this table, use the criteria in the child activity room table.
Finishes	**Walls.** Vinyl wall covering or other hard, durable, easily-cleaned surface up to 48 in above finished floor. Painted gypsum wall board above. Provide continuous vinyl chair rail bumpers at the transition point. Provide heavy vinyl bumpers on all corners. Provide an impervious wall finish on walls directly adjacent to the water closets and lavatories areas that will withstand continuous cleaning. **Service Exception:** Navy requires epoxy painted impact resistant gypsum wall board up to 48 in (1220 mm) above finished floor. **Floor.** Seamless sheet vinyl or linoleum sheet with the edges turned up the walls a minimum of 6 in. (150 mm) to form an integral coved base. **Ceiling.** ACP
Plumbing	Sinks shall have single-action, pre-mixing, automatic shut-off controls mounted within 14 in. (355 mm) of the leading edge of the lavatory. Provide a floor drain. **Infant/Pre-toddler.** Provide one child water closet with a seat height of 10 in (250 mm) and flush controls 20 to 30 in. (510 to 760 mm) above finished floor. Provide one child hand-washing sink mounted at 22 in. (550 mm) above finished floor with 19 in. (480 mm) clearance for knee space. **Toddler/Preschooler.** Provide a minimum of two child water closets with a seat height of 11 in (280 mm) and flush controls 20 to 30 in. (510 to 760 mm) above finished floor. Provide two child hand-washing sinks mounted at 22 in. (560 mm) above finished floor with 19 in. (480 mm) clearance for knee space. **Service Exception:** Air Force does not allow partitions in the toddler CAR. **Preschooler.** Provide a minimum of two child water closets with a seat height of 11 in (280 mm) and flush controls 20 to 30 in. (510 to 760 mm) above finished floor. Provide two child hand-washing sinks mounted at 22 in. (560 mm) above finished floor with 19 in. (480 mm) clearance for knee space.
Casework/ Built-in Equipment	Provide toilet-tissue dispenser at 14 in (355 mm) above finished floor and within reach of a child on the water closet. Provide a hands-free paper towel dispenser without serrated edges at the lavatory. Provide a shatter-proof mirror over the sink with the bottom edge no higher than 29 in (740 mm) above finished floor. Also provide an additional full-height shatter-proof mirror with safety edges and the bottom edge no higher than 18 in (455 mm) above finished floor. **Toddler/Preschooler.** Provide partitions between the water closets with the bottom of the partition at 9 in (230 mm) above finished floor and the top of the partition no higher than 36 in (915 mm). **Preschooler.** Provide partitions between the water closets with the bottom of the partition at 6 in (150 mm) above finished floor and the top of the partition no higher than 42 in (1065 mm). If a school-age care program is combined with a CDC, see Chapter 2, Facility Planning, for additional requirements.
User-provided FF&E	None required.

Special Requirements	The water closets shall not be visible from the door and corridors windows and shall be partially screened from the rest of the room with half-height partitions, but no door. Design to accommodate easy supervision and the amount of congestion that can occur in the toilet, especially before meal times. **Service Exceptions:** The Navy and Marine Corps require lavatories to be located in the same space as the water closet, but open and visible to the rest of the room. The Air Force requires lavatories be located adjacent to, but outside of, the water closet space.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-12. CAR DIAPER CHANGING AREA

Description/ Usage	Provides diapering station and diaper storage in every CAR. Where information is not provided in this table, use the criteria in the child activity room table.
Finishes	**Walls.** Vinyl wall covering or other hard, durable, easily-cleaned surface up to 48 in. (1220 mm) above finished floor. Painted gypsum wall board above. Provide continuous vinyl chair rail bumpers at the transition point. Provide heavy vinyl bumpers on all corners. Provide an impervious wall finish on walls directly adjacent to the changing counter that will withsand continuous cleaning. **Service Exception:** Navy requires epoxy painted impact resistant gypsum wall board up to 48 in. (1220 mm) above finished floor. **Floor.** Seamless sheet vinyl with with an integral cove base. **Ceiling.** ACP
Plumbing	Provide one deep, underhung sink with a swivel goose neck faucet, hands-free operation, and a 30 second automatic shut-off. Provide a dedicated shut-off valve.
HVAC	Provide an exhaust fan at the diaper changing area.
Power	Provide a counter-height duplex outlet.
Casework/ Built-in Equipment	Provide a 34-in.-high, 24-in.-deep (865 x 610 mm) solid-surface changing counter with integral storage underneath and integral, retractable steps that lock in place. Changing counter surface shall be a minimum of 36 in. (915 mm) long for the infant/pre-toddler CAR and a minimum of 48 in. (1220 mm) long for the toddler and preschooler CARs. Provide a safety device on either side of the changing surface area that extends 3 in. (75 mm) above the surface of the mat (mats are typically 1 in. (25 mm) thick). This changing surface shall be directly adjacent to the sink. Provide hands-free paper towel (cone-type), soap, glove, and plastic bag dispensers within reach of the caregiver at the table. Provide 10 compartmentalized cabinets 9-in.-wide, 9-in.-high, and 12-in.-deep (230 x 230 x 305 mm) for storage of diapers and products. If upper cabinets are provided, ensure the caregiver will have visual access of the room while standing at the diaper changing area. Also ensure that cabinets do not inhibit the child from stading on the changing surface.
Furnishings Fixtures & Equipment (FF&E)	Two foot-operated, covered metal containers within reach of the caregiver standing at the changing table: one for soiled disposable diapers and one for laundry. The diaper container shall be waterproof, washable, and have an airtight lid.
User-provided FF&E	None required.
Special Requirements	Provide childproof latches or magnetic locks to any storage cabinets within a child's reach.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-13. CAR FOOD PREPARATION AREA

Description/ Usage	Provides space to store and heat individual bottles and food in every CAR. Where information is not provided in this table, use the criteria in the child activity room table.
Finishes	**Walls.** Vinyl wall covering or other hard, durable, easily-cleaned surface up to 48 in. (1220 mm) above finished floor. Painted gypsum wall board above. Provide continuous vinyl chair rail bumpers at the transition point. Provide heavy vinyl bumpers on all corners. **Service Exception:** Navy requires epoxy painted impact resistant gypsum wall board up to 48 in. (1220 mm) above finished floor. **Floor.** Seamless sheet vinyl with vinyl base. **Ceiling.** ACP
Plumbing	Provide one sink with a single-lever faucet and a dedicated shut-off valve.
Power	Provide a duplex outlet for the refrigerator and a counter-height duplex outlet for appliances.
Casework/ Built-in Equipment	Provide a 34-in.-high, 96-in.-long (865 x 2440 mm) solid-surface counter with base cabinets, the integral sink, and a 4-in. (100-mm) high, integral backsplash. The cabinets shall have heavy-duty hinges, non-protruding handles/pulls/hardware, and easily-cleanable surfaces. Provide one lockable cabinet. If upper cabinets are provided, ensure the caregiver will have visual access of the room while standing at the food preparation area.
Furnishings Fixtures & Equipment (FF&E)	In infant and pretoddler rooms, provide an 8 $ft.^3$ (.23 m^3) minimum, under-counter refrigerator.
User-provided FF&E	None required.
Special Requirements	Physically separate this area from the diaper changing area to meet sanitation requirements. Do not locate this area under any sanitary or drain lines running through the ceiling. Provide childproof latches or magnetic locks to any storage cabinets within a child's reach.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-14. CHILD INTEREST CENTER – BLOCKS

Description/ Usage	A subspace of every CAR for children to build without getting in each other's way. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Carpet with vinyl base. **Service Exception:** The Navy requires seamless sheet vinyl with vinyl base and area rugs.
Plumbing	None required.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Define the area with child-sized shelves: two shelves for blocks and one for props.
User-provided FF&E	Unit blocks, hollow blocks, and other types of blocks and construction materials. Props include cars, people, animals, and traffic signs.
Special Requirements	Locate away from traffic, preferably in a corner.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-15. CHILD INTEREST CENTER – DRAMATIC PLAY

Description/ Usage	A subspace of every CAR designed to inspire creative and imaginative play, located near the block area. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Carpet with vinyl base. **Service Exception:** The Navy requires seamless sheet vinyl with vinyl base and area rugs.
Plumbing	None required.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Portable child-size home living equipment, children's tables and chairs, child accessible storage for props and dramatic play accessories, and child-height shatterproof mirrors.
User-provided FF&E	Props and dramatic play accessories.
Special Requirements	Equip with items that reflect the ethnic and cultural backgrounds of the group and include items traditionally used by men as well as women.

TABLE 4-15. CHILD INTEREST CENTER – DRAMATIC PLAY

For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-16. CHILD INTEREST CENTER – TOYS AND GAMES

Description/ Usage	A subspace of every CAR for table and floor toys, collectibles, and games of varied complexity. This space double functions for eating and shall be adjacent to the food preparation area. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Seamless sheet vinyl with vinyl base.
Plumbing	None required.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Provide age-appropriate, child-sized tables and chairs to accommodate the appropriate group size. Provide low shelves to hold materials in labeled containers.
User-provided FF&E	Toys and games.
Special Requirements	Locate near other quiet activity areas.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-17. CHILD INTEREST CENTER – ART

Description/ Usage	A subspace of every CAR for art activity. This space double functions for eating and shall be adjacent to the food preparation area. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Seamless sheet vinyl with vinyl base.
Plumbing	In toddler and preschool CARs, provide a stainless steel sink with a gooseneck faucet, wrist handles at 22 in. (560 mm) above finished floor, and a sink-mounted bubbler unit with a mouth guard, angled jet and front or side mounted controls. Provide traps that are easily accessible for cleanout.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Casework/ Built-in Equipment	Provide clip strips for the display of children's work and safety hooks for smocks.
Furnishings Fixtures & Equipment (FF&E)	Provide child-height easels, drying racks, and a work bench with tool storage. Provide low shelves to hold materials in labeled containers accessible to children.

TABLE 4-17. CHILD INTEREST CENTER – ART

User-provided FF&E	Provide a variety of materials for painting, drawing, cutting, and constructing.
Special Requirements	Locate away from traffic.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-18. CHILD INTEREST CENTER – LIBRARY

Description/ Usage	A subspace of every CAR for the library and literacy hub. The area includes comfortable places and materials needed for looking at books, listening to recordings, writing, and story telling. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Carpet with vinyl base. **Service Exceptions:** The Navy requires seamless sheet vinyl with vinyl base and area rugs.
Plumbing	None required
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable. Provide additional outlets for reading lamps and music players.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Provide a bookshelf accessible to children, a writing table with storage for an assortment of writing materials, and space to display the alphabet and children's names. Provide child-sized, easily-cleaned, vinyl upholstered seating for reading.
User-provided FF&E	Books and writing materials.
Special Requirements	Locate away from traffic.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-19. CHILD INTEREST CENTER – DISCOVERY

Description/ Usage	A subspace of Preschool CARs that provides space for children to explore and investigate. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Seamless sheet vinyl with vinyl base.
Plumbing	None required.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (130 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Casework/ Built-in Equipment	Provide low shelving.
Furnishings Fixtures & Equipment (FF&E)	Sensory tubs, table, labeled containers and trays for storing nature collections and investigation tools.
User-provided FF&E	None required.
Special Requirements	Locate near a window.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-20. CHILD INTEREST CENTER – SAND AND WATER

Description/ Usage	A subspace of every CAR for sand and water play. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Seamless, non-slip sheet vinyl with vinyl base.
Plumbing	No dedicated sink required. Locate near a water source such as the art sink (if provided), child toilets, or food preparation areas. Provide a floor drain.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Child accessible storage for both wet and dry play props. (A plastic tub beneath each table will suffice.)
User-provided FF&E	None required.
Special Requirements	

TABLE 4-20. CHILD INTEREST CENTER – SAND AND WATER

For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-21. CHILD INTEREST CENTER – MUSIC AND MOVEMENT

Description/ Usage	A subspace of every CAR for music and movement. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Carpet with vinyl base. **Service Exception:** The Navy requires seamless sheet vinyl with vinyl base and area rugs.
Plumbing	None required.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable. Provide a dedicated outlet for a music player.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Child accessible storage for musical melody and rhythmic instruments and a variety of movement props.
User-provided FF&E	A CD player and an assortment of recorded music, including children's music and instrumental recordings diverse in style and tradition and representative of the children's cultural backgrounds.
Special Requirements	
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-22. CHILD INTEREST CENTER – COOKING

Description/ Usage	A subspace of Preschool CARs for cooking. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Seamless sheet vinyl with vinyl base.
Plumbing	No dedicated sink required. Locate near the art sink.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable. Provide dedicated outlets for cooking appliances.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Mobile cooking cart, including storage bins containing aprons, bowls, child-sized cooking utensils, measuring devices, and a timer. Provide a blender and picture recipe cards.
User-provided FF&E	None required.
Special Requirements	Locate near the art area.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-23. CHILD INTEREST CENTER – COMPUTERS

Description/ Usage	A subspace of Preschool CARs for computer activities. Where information is not provided in this table, use the criteria in the child activity room table.
Floor Finish	Carpet with vinyl base. **Service Exception:** The Navy requires seamless sheet vinyl with vinyl base and area rugs.
Plumbing	None required.
Power	Provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable. Provide dedicated outlets for computers and printers.
Casework/ Built-in Equipment	None required.
Furnishings Fixtures & Equipment (FF&E)	Provide age-appropriate, child-sized desks and chairs to accommodate the appropriate group size. Include two chairs at each desk.
User-provided FF&E	Computers and color printers. Provide a variety of age and developmentally appropriate software. Provide a surge-protected power strip underneath the tables or desks to organize cords and keep them out of children's reach.
Special Requirements	Locate near or within the library area.

TABLE 4-23. CHILD INTEREST CENTER – COMPUTERS

For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

TABLE 4-24. MULTIPURPOSE ROOM

Description/ Usage	This optional space accommodate children 24 months to 6 years of age for large group activities, wheel toy play, exercise, group games, or indoor play in extremely hot or cold climates. This room can also support other activities such as parenting classes and staff training.
Ceiling Ht.	10 ft. (3.1 m) minimum and 12 ft. (3.7 m) maximum.
Finishes	**Walls.** Vinyl wall covering or other hard, durable, easily-cleaned surface up to 48 in. (1220 mm) above finished floor. Painted gypsum wall board above. Provide continuous vinyl chair rail bumpers at the transition point. Provide heavy vinyl bumpers on all corners. **Service Exception:** Navy requires epoxy painted impact resistant gypsum wall board up to 48 in. (1220 mm) above finished floor. **Floor.** Seamless sheet vinyl with vinyl base. **Ceiling.** ACP
Plumbing	None required.
HVAC	Provide system per Chapter 3, HVAC. In addition, maintain 35 to 50% humidity, provide exhaust at 5 cfm/person, and maintain 68°F (20°C) minimum and 78°F (26°C) maximum. Monitor temperature within 12 in. (305 mm) of the finished floor by means of a remote mounted bi-metallic thermometer. Provide uniform air velocities of no more than 30 ft. (9.14 m) per minute 12 in. (305 mm) from the floor in all child activity spaces, unless otherwise noted. Provide individual room control and locate thermostats 54 in. (1370 mm) above the floor. Incorporate night and weekend setback capability. Use room thermostats that adjust accordingly to maintain the appropriate temperature as measured by the bi-metallic thermometer. Locate or protect heating surfaces to ensure children cannon come in contact with surfaces above 110°F (43°C). In colder climates and if budget allows, provide a radiant floor heating system as either primary or supplemental system.
Fire Protection	Provide system per Chapter 3, Fire Protection.
Power	Provide system per Chapter 3, Electrical. In addition provide wall duplex outlets at 8 ft. (2.44 m) on center. Provide one duplex outlet on walls less than 9 ft. (2.74 m) long. All outlets shall be 54 in. (1370 mm) above finished floor and shall have integrated child safety features. Removable caps or plugs are not acceptable.
Lighting	Provide system per Chapter 3, Electrical. As an exception, variable dimming switches are not permitted.
Communication	**CCTV.** Provide outlets required for full coverage **CATV/Internal Video.** Provide one outlet. **Intercom.** Provide system remote with a handset for private conversations. **Telephone.** None required. **Data.** Provide outlets as required for equipment.
Security	Provide vision panel in all doors per Chapter 3, Interior Construction.
Acoustics	Design space to comply with Chapter 3, Interior Acoustics, and provide partition and door construction with a minimum STC rating of 52.
Casework/ Built-in Equipment	Provide storage closet.
Furnishings Fixtures & Equipment (FF&E)	None required.

TABLE 4-24. MULTIPURPOSE ROOM

User-provided FF&E	None required.
Special Requirements	Provide interior windows to corridors at 42 in. (1070 mm) above finished floor, a minimum of 36 in. (915 mm) high, and a minimum of 10 ft.^{2} (.93 m^2). total window area (no horizontal members blocking view of either adults or children). Do not use folding or sliding partitions or doors. Provide finger guards on the hinge edge of both the interior and exterior sides of all doors up to 60 in. (1525 mm) minimum above finished floor. Provide natural light from non-breakable skylights or a clerestory. Demountable and retractable partitions are not permitted in the multipurpose room.
For use during project execution by the appropriate Service agency	
Occupancy	Staff. Customers.
Min. net m^2 (ft^2)	

CHAPTER 5 OUTDOOR ACTIVITY AREAS

5-1 INTRODUCTION/PURPOSE.

The Outdoor Activity Area provides outdoor play activities for all age groups. It is not simply a place for "recess;" it supports a program of activities, and as such is an extension of the interior activity room space.

5-2 PLANNING CRITERIA.

5-2.1 Size.

Provide a minimum of 100 $ft.^2$ (9.3 m^2) per child up to 100 children. For more than 100 children, provide an additional 50 $ft.^2$ (4.6 m^2) for each additional child. For example, for 75 children, plan for 7,500 $ft.^2$ (697 m^2). For 150 children, plan for 12,500 $ft.^2$. (1,161 m^2). If site and budget allows, provide larger outdoor activity areas. [confirm with AF]

5-2.2 Grade.

Provide a minimum slope of 1 percent for all paved areas, 2 percent of all grassed areas and a maximum slope of 5 percent throughout the entire outdoor activity area.

5-2.3 Layout.

Do not create blind spots or hidden areas within the playgrounds. Ensure design accommodates adult visual supervision of children at play, and avoid areas where unsupervised mischief or child abuse can occur.

5-2.3.1 Utilize Existing Features.

Preserve natural landscape features, including existing topography, trees, and vegetation, and supplement as needed to provide a varied natural environment. Ensure that natural features such as hills and nature areas are accessible to everyone and that plants and vegetation are non-toxic and don't have seeds or other elements that could be choked on. Integrate plants into the entire play area rather than provide isolated nature areas.

5-2.3.2 Utilities.

The only utilities permitted in the outdoor activity area are those actively supporting the outdoor activity area. Do not locate mechanical equipment, transformers, storm drains, and manholes in the outdoor activity area.

5-2.3.3 Drainage.

Provide proper drainage on the site and under the playground equipment to permit use of the playground after inclement weather. See Chapter 3, Site Design, for additional grading and drainage criteria.

5-2.3.4 Adjacencies.

Design outdoor play areas to directly adjoin the CDC building. Locate age-specific play areas immediately adjacent to the age-appropriate activity rooms. Locate play areas in view of the activity rooms they serve.

5-2.3.5 Access and Exiting.

Provide a minimum of two access points: One from the activity room into the activity area, and one from the activity area to the outside site. Design the outside site access point to allow the retrieval of play equipment (i.e., balls). Design to accommodate the movement of maintenance equipment into the play area and allow an emergency exit. Pave the main entrance pathway.

5-2.3.6 Climate Considerations.

Accommodate the prevailing weather patterns that can affect children's comfort. For example, if sited in an area with prevalent northerly winds, locate the play areas on the south side of the building. Provide natural wind breaks (trees) for extra protection from the elements.

5-3 GENERAL DESIGN CRITERIA.

A certified playground safety inspector shall design the playground or review and approve the final design.

The outdoor activity area is divided into age-specific areas that correspond to the facility child activity rooms. General design criteria that apply to all ages and portions of the outdoor activity area are provided below.

5-3.1 Accessibility.

It is the policy of DoD to integrate children with special needs into the outdoor play environment with their appropriate group. To accomplish this, provide a diversity of play opportunities and equal opportunity for all children regardless of ability. Discuss accessibility needs with the CDC staff before starting the design, and note the following information.

5-3.1.1 **ADAAG Interpretation.**

ADAAG includes a special application section for play areas that includes scoping and technical provisions for ground level and elevated play components, accessible routes, ramps and transfer systems, ground surfaces and soft contained play structures. This amendment, identified as ADAAG 15.6, can be accessed at the following Web site as a design guide: http://www.access-board.gov/play/finalrule.htm. Children up to 3 years old (toddlers) are not self-mobile or independent wheelchair users. Assume that children of these ages require assistance by caregivers.

5-3.1.2 **Accessibility Pathways.**

Provide an accessible pathway throughout the play area. Provide a safety-surfaced path for a wheelchair to approach, but not roll onto, manufactured play equipment. Do not provide access ramps that allow trike access onto equipment. The optimum solution is to provide an accessible surface up to the equipment and provide transfer platforms to help the child onto the equipment. Design play structures and play areas to be accessible. Provide specially designed decks and railings for transfer out of wheelchairs and onto equipment.

5-3.1.3 **Access to Use Zone Surfacing.**

Meet zone criteria for surfacing, but also design to wheelchairs to allow accessibility where possible. Use zone criteria take priority over equipment accessibility.

5-3.1.4 **Sensory Rich Materials.**

Provide a variety of materials to stimulate and entertain children, including those who are visually impaired, hearing impaired or who have other special needs.

5-3.1.5 **Special Requirements.**

For requirements to accommodate children who are severely handicapped in the child development program, consult with the contacts provided in Chapter 1, Regulatory Authorities.

5-3.2 **Storage.**

Provide an enclosed, weather-tight, vandal-proof storage shed in each age-specific activity area that is of a design that is architecturally compatible with the CDC. Comply with the following:

- Locate storage to be readily accessible to the age-specific activity area and so it does not create any blind spots in any portion of the Outdoor Activity Area.

- Connect the storage to the activity areas with hard-surface pathways.

- Ventilate but do not air condition.
- The floors shall be concrete sloped to the door for drainage.
- Interior clear height shall be a minimum of 7 ft. (2135 mm).
- Provide stable storage bins and racks.
- Provide doors 4 ft. to 6 ft. (1220 mm to 1830 mm) wide that are visible from the building and equipped with clear safety glazing.
- Doors shall swing outward, meet the requirements for preventing finger entrapment, and be equipped with vandal-proof hardware and keyed locks that can be opened from the inside without a key.

5-3.3 **Fencing.**

At a minimum, enclose the perimeter of the entire outdoor activity area with a 5 ft. (1520 mm) high fence. Add or position planting or landscape features to preclude an adult from reaching over the fence. **Service Exception:** Navy facility planners must submit site plans to the contacts identified in Chapter 1, Regulatory Authorities, to determine if a taller fence or solid wall is required. When the outdoor activity area is adjacent to hazards, busy roadways, or is in a high security risk neighborhood, enclose the perimeter of the entire outdoor activity area with an 8 ft. (2440 mm) high fence.

Enclose each age-specific area within the perimeter with a 3 ft. to 5 ft. (915 mm to 1520 mm) high fence. Provide gates between age-specific areas.

Comply with the following in the design of the fences.

- The fence design shall be compatible with the architecture of the CDC and be more than simply utilitarian. Provide a combination of fencing materials to avoid an institutional effect. Black or dark green vinyl-coated chain link is the preferred fence material. Exposed galvanized wire is not permitted.
- Use bollards, raised planters, or other devices to protect play areas located next to driveways or roads where cars could swerve into the play area.
- Do not make fences out of wood. **Service Exception:** The Marine Corps allows wood fences that are smooth-finished, splinter-free, and of guaranteed non-toxic materials for exterior use.
- The top edge shall be selvage knuckled. The fencing componets shall not expose sharp points or edges that could cut or puncture children's skin. All fastening devices used for fence construction shall be turned sideways or shall not project perpendicular to the fence surface beyond .125 in. (3.2 mm).

- The fence bottom shall be buried a minimum of 3 in. (75 mm) below grade.
- Space between vertical elements shall be no more than 3.5 in. (85 mm).
- No openings in the fence shall be between .38 in. (9 mm) and 1 in. (25mm) in size as pinch protection.
- Additional information on entrapment dimensions is provided in CPSC Handbook for Public Playground Safety (Handbook).
- Coordinate gate sizes to accommodate the evacuation cribs (See Chapter 4, Child Activity Rooms).
- Perimeter egress gates shall only be operable from the interior side, have adult-controlled securing devices to prevent child operation, and pinch/crush protection on the hinges. In addition, design the gate to preclude operation by an adult reaching over the fence from the exterior side as a child-abuse prevention measure.
- Provide at least one access gate that is 10 ft. to 12 ft. (3050 mm to 3650 mm) wide for emergency or service vehicles.
- Ensure that fences do not impede caregiver supervision of children.
- Fences shall have smooth caps and no finials or sharp picket tops. Finials or sharp picket tops are permitted only on 8 ft. (2440 mm) high fences.
- Design fences to discourage climbing. Do not use horizontal slats or horizontal rails. Design walls used for barriers to discourage climbing. Design fences to be capable of withstanding code specific force applied horizontally.

5-3.4 Shade.

Shade is a requirement for the CDC to receive DoD certification. Provide each age-specific activity area with a structure or structures to provide shelter from the sun and inclement weather. At a minimum, provide whichever is greater: 10 percent shaded area per each age-specific area or a minimum of 15 $ft.^2$ (1.4 m^2) per child for the maximum number of children occupying the areas at any one time (see Chapter 5, Planning Criteria). At a maximum, at least 50 percent of the play area must be exposed to direct sunlight during the morning and afternoon use periods.

Shade structures include exterior screened rooms, park shelters, awnings, porches, gazebos, and umbrellas. Supplement structures with trees and other natural landscaping. All structures shall provide a minimum shaded area of 6 ft. (1830 mm) in any direction. The degree and orientation of shade will depend on local climatic conditions. Transitional areas such as a patio, deck or platform that serve as a link

between interior and exterior spaces are an effective means to provide shade. All shade structures shall comply with the criteria provided in Chapter 5, Equipment Requirements.

5-3.5 Equipment Requirements.

5-3.5.1 Industry Standards.

Playground equipment and shade structures shall comply with the minimum standards put forth in the guidelines listed below. In some cases, this UFC may include more stringent guidelines than those listed. In those cases, follow the criteria identified in this UFC. Use the most recent editions of the following publications:

- The Consumer Product Safety Commission (CPSC) (http://cpsc.gov/) Handbook for Public Playground Safety. (Although the CPSC provides guidelines for unsupervised public play settings for children two years and older, the CDC playground must safely accommodate supervised children as young as 6 weeks of age.)
- ASTM F1292, Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment.
- ASTM F1487, Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
- ASTM F1951, Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment.
- ASTM F2373, Standard Consumer Safety Performance Specification for Public Use Play Equipment for Children 6 Months through 23 Months.
- ADAAG. See additional information in Section 5-3.1.

5-3.5.2 Additional DoD Standards.

Show all use zones for play equipment on the site plan to ensure there is no conflict between play activities on the ground and swinging or jumping from the equipment. Do not overlap use zones. The minimum height above ground surface requiring a use zone is 20 in. (500 mm). As a minimum, design the infant crawl space, to include a 4 ft. (1.2 m) distance outside the infant crawl curb, as a use zone.

Please note, if young school-age children are using the playground, different use zone criteria apply.

5-3.5.2.1 **Selection Criteria.**

- **Range.** Provide a sufficient range of equipment to accommodate every type of play—exercise, dramatic, construction, organized games, social—engaged in by the age group served.

- **Novelty.** Select interesting play equipment with both simple and complex features. Group play equipment together to provide a sequence of play opportunities rather than providing single, large, fixed-in-place structures. Provide for both solitary and social play. Select equipment that can be modified.

- **Flexibility.** Use composite units or super-structures that stimulate a wide range of motor functions. Provide equipment that can be used equally well by one child or by several children simultaneously. Do not select items designed to look like animal forms or other recognizable objects. Use dramatic play props that are adaptable to a range of make-believe roles or themes.

- **Challenge.** Provide equipment that provides clear, graduated stages of accomplishment, e.g., variable-height steps or climbing equipment with landings at different heights.

- **Scale.** Size equipment to match the age and development of child users.

- **Aesthetics.** Design children's playgrounds for beauty as well as function. Select equipment colors and styles that are appealing to children and compatible with the facility exterior. Integrate equipment with natural vegetation and landforms.

5-3.5.2.2 **Installation Criteria.**

The equipment purchasing agreement shall include a requirement for the manufacturer to inspect the equipment after installation and confirm in writing that installation conforms to manufacturer's instructions and to CPSC and ASTM Guidelines. Also provide a contractual agreement for a skilled, certified, independent playground safety consultant to inspect the entire playground after the installation is completed. Have experienced playground installers conduct or supervise installation.

5-3.5.2.3 **Exclusions.**

Do not use the following items in the Outdoor Activity Areas, regardless of CPSC or ASTM approval:

- Animal swings, metal and otherwise.

- Wood equipment. Wood equipment is not permitted due to maintenance concerns.

- Metal slides. Metal slide surfaces are not allowed.
- Merry-go-rounds.
- Hard-seat swings.
- Trampolines.
- See-saws.
- Zip lines.

5-3.5.2.4 **Exceptions and Modifications.**

Observe the following exceptions and/or modifications to previous DoD policy or CPSC Handbook and ASTM requirements when selecting equipment for CDC Outdoor Activity Areas:

- Spring toys are allowed if meeting CPSC Handbook and ASTM standards. However, this equipment is discouraged due its limited potential for creative play.
- Tunnels and tunnel slides require view panels. Specify only on preschool playgrounds.
- Use climbing structures that allow for free fall.
- Balance beam criteria vary by age group. Specify the CPSC Handbook standard for balance beams only on preschool playgrounds. For toddler playgrounds, the maximum height for a balance beam is 6 in. (150 mm).

5-3.6 **Surfaces.**

Use a variety of surface materials, with varying finishes, patterns, textures, and colors to stimulate interest and increase play opportunities. The outdoor activity area has four categories of surface areas with specific requirements: use zones, wheeled toy pathways, other hard surface areas, and general.

5-3.6.1 **Use Zones.**

Use zones are the areas under and around playground equipment and are defined by ASTM F1487. A required submittal is the commercial playground safety surface manufacturer's warranty and liability in the specifications and transfer to the Using Service. Include a written verification by the manufacturer that the playground safety surface meets the requirements of the CPSC Handbook and ASTM in the submittal section of the specifications.

The Services prefer poured-in-place resilient safety surfaces. Approval from the using Service is required for any other use zone surface material. Do not use the following surface materials:

- Engineered and natural wood fiber.
- Engineered loose rubber and ground tires.
- Any materials that are subject to compaction, ingestion, flammability, and wind dispersion.

Service Exception: USMC allows any fall protection surface that meets the requirements of the CPSC Handbook.

5-3.6.2 **Wheeled Toy Pathways.**

Acceptable materials include concrete and stone and masonry pavers. The edge of pathways shall be tapered for transitions and shall not create trip hazards. Joints shall be not wider than .5 in. (12 mm) because they may cause toys to tip. Adjacent grading and/or sod installation shall be within .75 in. (19 mm) of the pathway surface height and shall allow for settlement to minimize replacement. Comply with the following when designing the wheeled toy pathways:

- Modular paving. Use non-grouted interlocking type pavers on sand placed over a continuous concrete setting bed. Install brick, stone or other non-interlocking type paving in grout over a continuous concrete setting bed. Do not install non-interlocking paving on sand in play areas, as the modular units may settle unevenly, resulting in a hazardous irregular surface. Where winter freezing is common and where poor soils occur, use a gravel base under concrete and reinforce to prevent cracking and deterioration.
- Concrete. Add color additives or surface finishes to improve the appearance of concrete and reduce glare. Avoid smooth steel trowel finishes, which can become slippery when wet. Where winter freezing is common and where poor soils occur, use a gravel base under concrete and reinforce to prevent cracking and deterioration. Cast-in-place concrete over a well-compacted sub-grade is the most durable, maintenance-free paving material for hard surface areas.

5-3.6.3 **Other Hard Surface Areas.**

These areas include sidewalks, seating areas, patios, and areas for hard-surface games. Use a variety of surface configurations and materials for these areas. Specify compaction during construction. Sidewalks, seating areas, and patios shall be concrete or stone and masonry pavers. Use brick and other types of modular paving for sidewalks to reduce the scale of these environments. The edge of sidewalks shall be

tapered for transitions and shall not create trip hazards. Hard-surface game areas shall be concrete.

5-3.6.4 **General.**

This encompasses any portion of the outdoor activity area not included in the other three defined areas. Use surfaces of grass or other natural landscaping. Use grass primarily in open, active play areas, passive play areas, and areas with low traffic levels. Do not use grass where wear and maintenance will become a problem. Locate grass in sunny areas where it will dry out quickly after rain. Artificial turf is not recommended for use as a playground surface; it can be abrasive and convey an unnatural impression. See Chapter 3, Landscaping for more information on non-paved areas.

5-3.7 **Plumbing.**

Protect all outdoor water sources from freezing with an underground shut off valve.

5-3.7.1 **Drinking Water.**

Drinking water is typically provided via a portable cooler and single-use cups managed by the caregiver. However, if budget permits, provide a minimum of one outdoor drinking fountain with mouth guard and angled jet in each activity area serving children older than 18 months. Provide outdoor fountains with frost-free operation and design to minimize clogging from sand or dirt. Use an appropriate height for the age group served, but do not exceed 24 in. (610 mm).

5-3.7.2 **Hose Bibs.**

Provide a minimum of one hose bib in each play area. Install hose bibs in a recessed wall box to prevent impact injury. Provide hose bibs with a frost-free water source and locate directly accessible to outside playgrounds.

5-3.7.3 **Misters.**

In hot, dry climates and if budget allows, provide misters. Connect misters to the potable water system and provide code-compliant back-flow prevention devices.

5-3.7.4 **Irrigation System.**

See Chapter 3, Irrigation for system criteria.

5-4 **AGE-SPECIFIC AREA DESIGN CRITERIA.**

5-4.1 **Infant and Pre-toddler.**

Separate but do not isolate this activity area from the other age groups. Provide a low fence, hill or other natural feature to separate crawling infants from more active toddlers,

but allow easy transition between these areas. The separation shall provide visual and audible connections but limit physical contact. Pre-toddlers can use either in infant area or the toddler area depending upon their level of development.

5-4.1.1 **Storage.**

Provide an individual 100 ft.^{2} (9.3 m^2) enclosed storage shed per Chapter 5, General Design Criteria.

5-4.1.2 **Shade.**

Shade is particularly important for infants and pre-toddlers. See Chapter 5, General Design Criteria, for additional information on shade.

5-4.1.3 **Play Areas and Equipment.**

Provide small steps, slopes, ground beams, climbing ramps, slight barriers and slides. If swings are provided, use belt-type baby seats with restraints. **Service Exception:** The Navy does not allow swings in the infant/pre-toddler area.

5-4.1.4 **Surfaces.**

Access paths from the CDC shall be concrete and double function as emergency egress paths. Modular paving shall not be used in this activity area. Play area surfaces shall consist of soft, resilient materials that protect crawling children and provide a comfortable surface on which to sit.

5-4.1.5 **Exclusions.**

Avoid excessive heights, abrupt surface level changes, and rough surfaces. The following items are not permitted in the infant/pre-toddler activity area:

- Treated wood
- Wood chips
- Pea gravel
- Pools of water

5-4.2 **Toddlers.**

This activity area must accommodate children playing alone, playing in pairs, and playing in small groups.

5-4.2.1 **Storage.**

Provide an individual 100 ft.^{2} (9.3 m^2) enclosed storage shed per Chapter 5, General Design Criteria.

5-4.2.2 **Play Areas and Equipment.**

Provide the following play areas and equipment in this activity area:

- Wheeled toy path.
- Quiet sand play area. Provide a sandbox with a retaining border that does not pose a tripping hazard, allows drainage, and will accommodate sand 18 in. to 24 in. (460 mm to 610 mm) deep. Locate the box so it is protected from the wind. Locate the box away from the entrance to the building and the drinking fountain to help alleviate concerns of tracking sand inside and clogging the fountain drain. Locate near storage. Turn over the sand to a depth of 18 in. (460 mm) annually and replace every two years. Provide raised troughs for wheelchair accessibility. If the sand area is less than 100 ft.^{2} (9.3 m^2) provide a cover. In cool, wet climates, locate sand areas in sunny locations and provide a sub-surface drain line system whenever possible to reduce dry out time. In hot, dry climates, provide shade over large sand areas to reduce heat and glare problems.
- Dramatic play area.
- Swings. Provide 50 percent bucket-type swings and 50 percent single axis swings. **Service Exception:** The Navy does not allow swings in the toddler area.
- Multi-purpose area.
- Climbing equipment. Simple, versatile equipment is more appropriate for toddlers than scaled down versions of older children's play structures.
- Semi-enclosed spaces such as small play houses or climb-through tunnels.
- Small slides.

5-4.2.3 **Exclusions.**

Avoid excessive heights, abrupt surface level changes, and rough surfaces. The following items are not permitted in the toddler activity area:

- Treated wood
- Wood chips

- Pea gravel
- Pools of water

5-4.3 **Preschoolers.**

The preschool activity area is larger than that required for infants and toddlers and requires more space for running and larger, more complex equipment.

5-4.3.1 **Accessibility.**

Preschoolers are self-mobile wheelchair users. Design this activity area to provide maximum accessibility.

5-4.3.2 **Storage.**

Provide an individual 150 ft.^{2} (13.9 m^2) enclosed storage shed per Chapter 5, General Design Criteria.

5-4.3.3 **Play Areas and Equipment.**

Provide the following play areas and equipment in this activity area:

- Wheeled toy path.
- Dramatic play area. Provide a larger, open-ended play superstructure offering many activities, but design to lend itself to dramatic play. Include elements such as playhouses, stages and props. Position these elements within the play area to allow the dramatic play to spill out and flow into other spaces. Place dramatic play materials and equipment in close proximity to each other and to wheeled vehicle paths.
- Construction area. Provide space for children to build freeform items and structures. Locate near storage for access to building materials, including blocks, wood boards, PVC pipe, paint, carpentry tools, ropes, and balls.
- Multi-purpose area.
- Swings. Locate swings in a separate area and provide adequate safety areas around swings to prevent conflicts with other activities. Use a flexible material for swing seats, such as the rubber belt-type, to avoid impact injuries. Hard seat swings are not allowed. Design swing top rails to not exceed 8 ft. (2.4 m) for children under four years old. **Service Exception:** The Navy only permits tire swings.
- Ball play area.
- Quiet activity space.

- Garden.
- Composite structure for climbing.
- Sand and water play. These areas should be adjacent to one another.
- Covered porch area. For use of musical devices, painting materials, chalkboards.

APPENDIX A REFERENCES

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APPENDIX B BEST PRACTICES

B-1 INTRODUCTION.

The following material identifies background information and other current, good design practices for CDCs. The designer is expected to review and interpret this guidance and apply the information according to the needs of the project.

B-2 DESIGNING FOR CHILDREN.

B-2.1 Stages of Development.

Human development research indicates that there are universal, predictable sequences of growth and change that occur in children during the first years of life. Each stage is characterized by behavior that is different from that of the preceding stage. Each stage also integrates all behaviors possible at previous stages, consolidates them, and prepares for development toward the next stage. Knowledge about child development, i.e., behaviors, activities, and materials for a specific age group, and understanding about individual children's needs, must be applied to design the most appropriate learning environment.

B-2.1.1 Infants.

Infancy, from birth to about 12 months, is the period when rapid changes of a child can be noted in terms of intellectual as well as physical development. This period is characterized by the sequential acquisition of abilities such as locomotion and grasping. An infant's behavior is centered on the manipulation of objects and performance of activities for the simple sensation of them.

B-2.1.2 Toddlers.

The major developmental changes from infancy to toddler-hood are the increase in physical capabilities, the use of language, and the ability to internalize thoughts. During this period a child establishes walking and running, begins to explore and experiment with the environment, and increases social experiences such as talking and seeking the attention of others. Personalities are manifested, as well as likes and dislikes. Play for these children will progress into fantasy and parallel play where, although often in groups, toddlers play without much interaction with other children.

B-2.1.3 Preschool.

The preschool age child, between three and five years, has increased control of fine motor skills, a large vocabulary, and often engages in cooperative play. These children are better able to concentrate and remember.

B-2.2 Anthropometric Guidelines.

Average physical dimensions of children, according to their chronological age, are presented in Table B-1 and illustrated in Figure B-1. These figures do not apply to children with disabilities.

TABLE B-1. ANTHROPOMETRICAL DATA

	Age In Years (The following dimensions represent averages)															
	Birth		0.5		1		2		3		4		5		6	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
Body Length	500	19.7	660	26	750	29.5	860	33.8	950	37.4	1040	41.9	1120	44.9	1170	46
Head Length	125	4.9	150	5.9	175	6.9	190	7.5	195	7.7	198	7.8	200	7.9	203	8
Head With	97	3.8	119	4.7	132	5.2	140	5.5	142	5.6	145	5.7	145	5.7	145	5.7
Head Circum-ference	556	21.9	439	17.3	472	18.6	498	19.6	505	19.9	511	20.1	511	20.1	516	20.3
Trunk Length	211	8.3	295	11.6	320	12.6	345	13.6	363	14.3	381	15	389	15.3	399	15.7
Shoulder Width	150	5.9	178	7	203	8	224	8.8	236	9.3	246	9.7	254	10	262	10.3
Chest Circum-ference	330	13	437	17.2	475	18.7	508	20	521	20.5	528	20.8	538	21.2	554	21.8
Abdominal Circum-ference	N/A		411	16.2	445	17.5	462	18.2	470	18.5	516	20.3	518	20.4	521	20.5
Pelvic Width	81	3.2	117	4.6	130	5.1	145	5.7	157	6.2	175	6.9	185	7.3	196	7.7
Arm Length	193	7.6	254	10	305	12	371	14.6	417	16.4	424	16.7	503	19.8	533	21
Hand Length	N/A		N/A		97	3.1	107	4.2	119	4.7	124	4.9	127	5	130	5.1
Hand Width	36	1.4	41	1.6	43	1.7	48	1.9	51	2	51	2	56	2.2	58	2.3
Leg & Thigh Length	168	6.6	208	8.2	244	9.6	312	12.3	371	14.6	437	17.2	582	22.9	627	24.7
Sitting Height	N/A		447	17.6	488	19.2	538	21.2	572	22.5	597	23.5	622	24.5	635	25
Knee Width	38	1.5	N/A		64	2.5	66	2.6	69	2.7	69	2.7	69	2.7	71	2.8
Weight (Kg/lbs)	3.4	7.5	7.6	16.8	10	22	12.6	27.8	14.6	32.2	17.3	38.1	19.5	43	21	46.3
Knee Pivot to Floor	N/A		N/A		N/A		244	9.6	264	10.4	287	11.3	318	12.5	340	13.4

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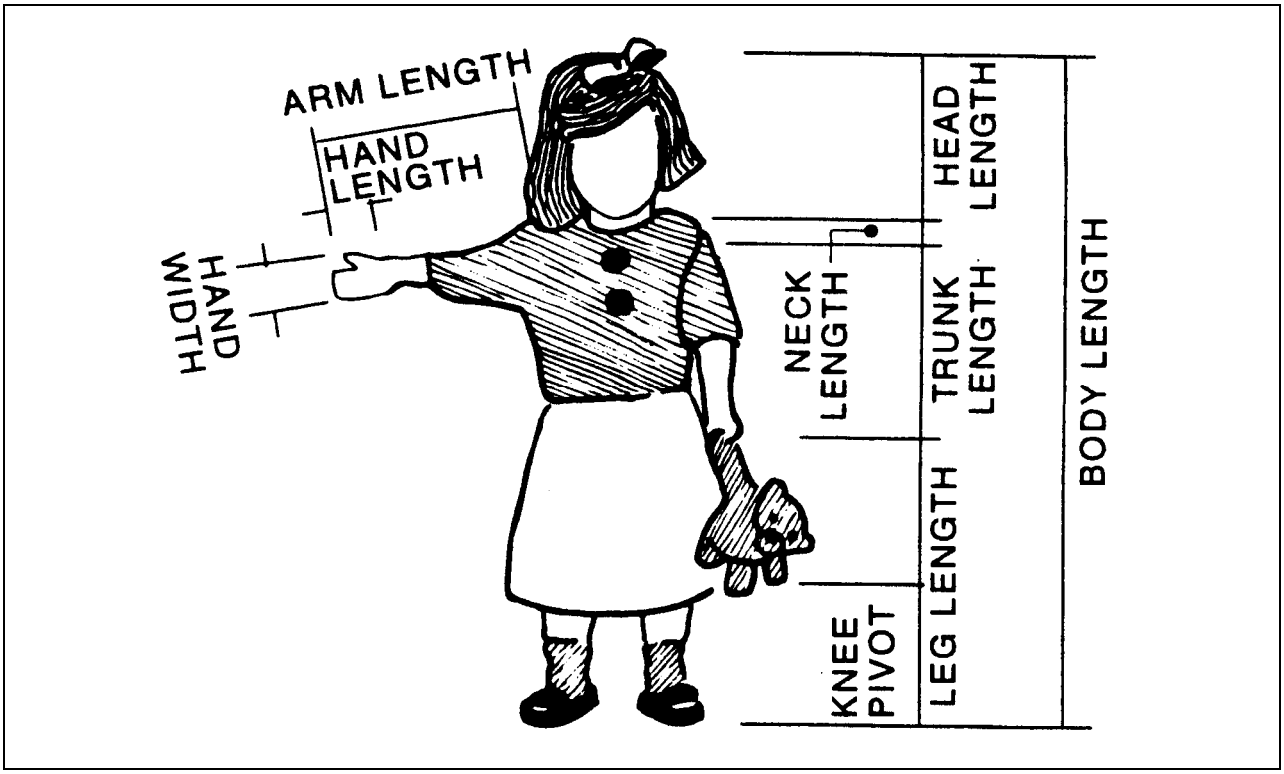
FIGURE B-1. ANTHROPOMETRIC DIMENSIONS



B-3 GENERAL DESIGN GUIDANCE.

B-3.1 Space Attributes.

The design effort must allow for, and be sensitive to, the differences in space attributes for children and those for adults as well as the differences in space usage by the children in different age groups. Information about the characteristics and activities of the children is included to provide rationale for aspects of design. The requirements and recommendations set forth in this UFC are aimed at establishing optimal design, though, when appropriate, specific maximum or minimum requirements are stated. The center design must meet the needs of children, caregivers, administrators, and parents by performing the following functions:

- Support the staff's care of children by creating safe and healthy environments that allow them to focus their efforts on the care and nurture of children. Provide features that encourage positive relationships between staff, children, and parents.
- Create an environment that comfortably accommodates the needs of well-qualified staff in order to attract and retain them.
- Facilitate family involvement in the center, particularly with the child's caregivers.

- Respond to local conditions, climate, and regional preferences in the design, while also considering the goals of the parents and sponsoring agency or agencies.

- Create a safe environment for both children and staff. Design the facility to ensure that children can not leave the facility without staff knowledge. Window and door criteria in Chapters 3 and 4 support this design objective.

- Create an appropriate, well thought-out and attractive child-oriented environment. The CDC should avoid a typical institutional atmosphere; it should be inviting and feel "home-like" for the child.

- Accommodate a child's scale, including how they will use the space, what they will see, and what kind of experience they will have, i.e., design through the eyes of a child.

- Provide an intriguing environment, but one devoid of overpowering colors, features and literal themes. Too much literalness can inhibit a child's creativity.

- Size the child activity rooms to accommodate the recommended group sizes and staff-to-child supervision ratios. Efficiently use space and provide strategically situated storage to accommodate effective supervision.

- Provide durable and cost effective materials and details. A CDC is used intensely; the design must be particularly sensitive to the life cycle cost of materials.

- Create a reasonably accommodating center for staff, parents and children in a cost effective manner.

- Provide for flexibility as the installations' demographic needs change.

B-3.2 **Exterior Design.**

Design CDCs to reflect a residential, non-institutional character. The physical environment supports the operational quality of a center and profoundly affects the behavior and development of children, as well as the efficient functioning and sense of well being in adult caregivers. The design must be sensitive to all environmental influences without compromising the functional program requirements. Accomplish this through sensitive architectural design that addresses the issues of environment, proportion, scale, forms, landscaping, and imagery that are important in this type of facility. Choose appropriate colors and materials that are complementary to installation plans. A pleasant functional environment influences the way caregivers react to the children. Because this facility is focused on children, use a pallet intriguing and rich but not over-stimulating or "flashy".

B-3.3 Interior Design.

Think of the center as a “home away from home” for the child. Design the interior spaces to dispel an institutional feeling, especially if it is treated in a “home-like” way. This may simply be circulation areas that allow stopping places for social interaction. Include elements such as neutral warm colors, low-level lighting, and soft residential-type furniture to create an inviting and reassuring reception for children. Provide offices with exterior windows to the extent possible. Use finishes that feel "home-like." For instance, small-scale finish materials, such as bricks, are typically preferable to large pre-cast panels. The dimension of brick is more congruent with the size of a child and his or her home experience.

Use textures to help cue children in activity areas. Provide a variety of textures on surfaces within reach of children, especially for infants and toddlers. Soft textures relax children while harder finishes and surfaces make a space noisier and more chaotic. Utilize soft textures whenever possible to promote relaxed and quiet behavior. Hard textures are more appropriate for large motor activity areas. Using subtle, varied and natural textures are highly encouraged.

B-3.4 Signage.

Interior signage and graphics are an important part of making the facility inviting to children and adults. The use of color to code different age group modules is an excellent way to create interest, identify the module and help children with a visual orientation throughout the facility. Avoid entire walls of graphics and designs that compete with children's work or display materials. Avoid cartoon and fairy tale characters. Use colors, textures, and finish materials on the walls and/or floors to define circulation patterns. Use signs with words and symbols where appropriate.

B-3.5 Site Walkways.

Develop a successful transition from the parking lot to the building entry by providing interesting walks that pass through natural or landscaped areas, wherever possible, and which overlook engaging sights such as playgrounds. Consider a child's perspective in this development.

B-4 INDIVIDUAL ROOM DESIGN GUIDANCE.

B-4-1 Entrance/Lobby/Reception.

The character of the main entry should communicate security and professionalism to the parents. At the same time, it must be fun and engaging to children. Pay attention to the design, materials, finishes, interesting volumes and colorful details.

B-4.2 Child Activity Rooms.

A prime objective of a successful design is to create conditions that allow caregivers and children to interact both verbally and non-verbally in large and small groups. To do this successfully, activity room space should not appear crowded. Include low tables and chairs and the space for caregivers to communicate individually with children. Define functional areas by furniture arrangements that vary depending upon the age group.

In order to maximize the amount of uninterrupted activity space and space devoted to childcare functions, design the circulation between the entrance and exits to be as direct as possible. Adjacent to circulation, it is appropriate to position tables and work surfaces, which tend to involve more crowded functions while retaining corners and floor area for more protected and nurturing activities.

B-4.2.1 Infants.

Infants engage in crawling, walking, floor play, table play, and wheel toy play. Provide a safe, soft, stimulating environment in which babies can crawl, explore, and interact with their caregivers. The infant room needs to be warm and nurturing in character. Because each infant may have a unique schedule, a variety of activities can take place in the infant room at any given time, ranging from playing, diaper changing, eating, sleeping, cuddling, and nursing. This variety of activities requires that quiet areas be separate from more active areas.

B-4.2.2 Pre-toddlers.

The pre-toddler activity room will hum with activity as pre-toddlers quickly move through their space, involved in all the activities available to them. Design an environment that is stimulating, offering the child a safe, yet warm and nurturing place to spend the day. Scale furnishings and equipment for this age group to encourage growth toward independence. Consider that pre-toddlers may nap more often than once a day. Pre-toddlers will gather at child-scaled tables for snacks and lunchtime. They can feed themselves with some assistance from their caregivers. In the pre-toddler open activity area, offer a range of opportunities for exploring and challenges in developing large motor skills. Design the activity area for running and cruising (movement through the space to view and select from a variety of activities) without disrupting children in other activities.

B-4.2.3 Toddlers.

Toddlers are busy experiencing their environment and developing essential motor skills as they take part in active play. In the toddler open activity area offer a range of opportunities for exploring and challenges in developing these motor skills. Provide features such as wide access to portable platforms and generous, clear pathways that avoid sharp corners. Locate manipulative toys and materials on low, open shelving

where the toddler can see and easily reach them. Though generally scale the space to child size, the activity room design must also permit caregiver access to all spaces.

B-4.2.4 Preschool.

Children at this age are actively exploring their environment; exercising large muscle skills by running, jumping, galloping, riding wheeled toys and playing various ball games. Provide a large amount of architecturally unrestricted available space that caregivers and children can divide into smaller interest areas. Their level of skills enables them to take part in more advanced activities, requiring a greater number of interest areas configured for small groups of children in each area. Other activities for this group are dramatic play, music, painting, puzzles, manipulative play, block play, pre-math, reading, and writing. Preschool age children are involved in various projects, including simple food preparation, problem solving, science, and gardening.

B-5 OUTDOOR ACTIVITY AREA.

B-5.1 General Design.

Design the outdoor play area not simply as a place for “recess” but to support a program of activities and be conducive to creative play. To the degree that climate permits, design the Outdoor Activity Area to accommodate many indoor activities—it is an extension of the interior activity room space. The play program encourages children to interact with the environment, each other, and the caregivers either in free play or through planned and structured activities.

Integrate play areas, to the greatest extent possible, into the overall design of the center. Ideally, design the indoor and outdoor spaces simultaneously so that a proper link can be made to join the two spaces.

B-5.2 Creative Play Opportunities.

Design the play environment to allow a wide range of movement; stimulate the senses; offer novelty, variety and challenge; and be safe and comfortable. Ensure novelty incorporating both simple and complex features. Incorporate textures such as sand, water, grass, flowers, trees, and smooth rocks (and other artifacts of nature) within the natural environment. Incorporate manufactured textures of wood, metal and plastic as well as elements that respond when acted upon within the play environment. Design the play environment to be open to many interpretations and uses in order for the child to exercise his or her power to manipulate it. Do not design the environment to impart preconceived notions of how to act or respond to the surroundings. With appropriate supervision, children will actively manipulate, transform, dismantle, and re-create the environment in order to learn about the makeup of the world.

B-5.3 **Safety Background.**

The major cause of playground injury is falling onto hard surfaces. Falls, head entrapments, strangulations, and contact with protrusions/projections on heavy swing seats account for most fatalities. Locate moving elements in areas away from natural child movement between zones.

APPENDIX C POISONOUS AND NON-POISONOUS PLANTS

Many popular house and garden plants are considered poisonous and can produce symptoms ranging from minor to severe. Table C-1 provides a non-comprehensive list of common plants that are known to be poisonous. Table C-2 provides a list of plants for which no evidence currently exists of a poisonous quality. These lists are provided by the Maryland Poison Center. Within the United States, check with local extensions of the US Department of Agriculture for more information about the nature of common plantings in specific locations. These lists are not intended to serve as a guide for plants to use or not use but are merely provided for informational purposes. See Chapter 3 for more information on landscaping and plant selection.

Refer to a comprehensive, commercial field guide for a complete list of poisonous plants. Additional information can also be found at the Army web site: http://chppm-www.apgea.army.mil/ento/plant.htm .

TABLE C-1. COMMON POISONOUS PLANTS

Amaryllis	Jerusalem cherry
Azalea	Jimsonweed
Barberry	Jonquil
Black locust	Lily-of-the valley
Boxwood	Mistletoe
Caladium	Mountain laurel
Castor bean	Narcissus
Chinaberry	Nephthytis/Arrowhead
Chinese evergreen	Nightshade family
Chrysanthemum	Oak (acorns)
Crown of thorns	Peony
Daffodil	Philodendron family
Dumbcane/Dieffenbachia	Poison ivy/oak/sumac
English ivy	Pokeweed
Euonymous	Privet
Four o'clock	Rhododendron
Fruit pits or seeds	Snowball bush/Hydrangea
Gladiola	Water hemlock
Holly	Wisteria
Hyacinth	Yew
Iris	

TABLE C-2. COMMON NON-POISONOUS PLANTS

African violet	Marigold
Christmas cactus	Mulberry (ripe berries only)
Coleus	Norfolk pine tree
Corn plant	Peperomia
Crocus	(spring) Petunia
Dandelion	Poinsettia*
Dogwood	Prayer plant
Dracaena	Pyracantha/Firethorn
Easter lily	Rose
Ferns	Rubber tree plant
Ficus*	Sansevieria/Snake plant
Forsythia	Scheffiera*
Fuchsia	Spider plant
Geranium	Swedish Ivy
Hibiscus	Tulip*
Honeysuckle	Wandering Jew
Impatiens	Wax plant
Jade plant	Wild strawberry/Snakeberry
Lilac	Zebra plant

***** Sap may be irritating.

APPENDIX D SAMPLE FURNISHINGS, FIXTURES AND EQUIPMENT LISTS

D-1 NAVY.

The following list is suggested items, broken down by traditional contractor-provided FF&E and user-provided items.

TABLE D-1. NAVY SAMPLE FURNISHINGS AND EQUIPMENT

Administrative Areas	**FF&E**	**User Provided**
File cabinet (4 drawers or 5 drawers)	✓	
Office chair with arms, office desk, arm chair, typewriter(s)	✓	
Time clock, safe	✓	
Lounge table(s), chair	✓	
Lockers per/box, coat rack, magazine rack(s)	✓	
Chair/table group(s), chair/couch group	✓	
Color TV(s) ,VCR(s), TV cart(s)	✓	
Clock	✓	
Cash register, calculator, computer/printer		✓
Wastebasket	✓	
Projection screen	✓	
Film strip projector, slide projector, overhead projector	✓	
Laminating machine	✓	
Book shelves	✓	
Credenza	✓	
Microwave oven, refrigerator, washers and dryers	✓	
Vacuum cleaner		✓
Video camera		✓
Storage unit, shelving units	✓	
Infant CAR		
Cribs/mattresses	✓	
Crib sheets and blankets		✓
Adult chairs with arms	✓	
Diaper/trash containers	✓	
Music player, music boxes		✓
Low shelves	✓	
High chairs	✓	
Table(s), cube/chairs	✓	
Infant climbers	✓	
Pull toys and mobiles		✓
Banners, pictures/posters, and artwork		✓
Clock, refrigerator	✓	

TABLE D-1. NAVY SAMPLE FURNISHINGS AND EQUIPMENT

Air purifier		✓
Diaper changing unit	✓	
Diaper changing pads		✓
Bibs, sippy cups		✓
Activity boxes		✓
Nesting /stacking toys		✓
Music collections		✓
Puzzle racks, bins		✓
Pound boards, sorting boxes, balls		✓
Books		✓
Puppets		✓
Area rug(s)	✓	
Water play set		✓
Smocks		✓
Tactile materials, bristle blocks		✓
Bye bye buggy	✓	
Pre-toddler CAR		
Cots	✓	
Cot sheets and blankets		✓
Toddler chairs, round tables, rectangular tables	✓	
Double sided, low shelving, book shelves	✓	
Sand/water table	✓	
Climber playfoam	✓	
Art easels	✓	
Art smocks, fence easels		✓
Play kitchen, play dishes, play food, play fruit, cultural food, cook set(s)		✓
Tricycles, bye bye buggy,	✓	
Adult chairs with arms, couch/chair	✓	
Trash containers	✓	
Music player		✓
Sand toys, push pull toys, soft blocks		✓
Puzzles, interlocking manipulatives		✓
Cars, trucks, dolls, doll carriages		✓
Banners, pictures/posters, and artwork		✓
Filing cabinet, clock, refrigerator	✓	
Air purifier		✓
Diaper changing unit	✓	
Diaper changing pads		✓
Activity boxes		✓
Nesting/stacking toys		✓

TABLE D-1. NAVY SAMPLE FURNISHINGS AND EQUIPMENT

Sippy cups, Bibs		✓
Music collections		✓
Puzzle racks		✓
Pound boards		✓
Rhythm instruments		✓
Cubbyholes, bins	✓	
Hats		✓
Books		✓
Area rug(s)	✓	
Water play set		✓
Doll high chair(s), doll bed(s), doll house(s)		✓
Science set(s), aquarium(s), magnets, stethoscope(s), and kaleidoscopes		✓
Pegs, tactile materials, bristle blocks		✓
Beads and lace		✓
Toddler CAR		
Cots	✓	
Cot sheets and blankets		✓
Toddler chairs, round tables, rectangular tables	✓	
Double sided, low shelving, book shelves	✓	
Sand/water table	✓	
Climber playfoam	✓	
Art easels	✓	
Art smocks		✓
Play kitchen, play dishes, play food, play fruit, cultural food		✓
Tricycles, bye bye buggy	✓	
Soft blocks		✓
Adult chairs with arms, couch/chair	✓	
Trash containers	✓	
Music player and music boxes		✓
Sand toys, push pull toys		✓
Puzzles, interlocking manipulatives		✓
Cars, trucks, dolls, doll carriages		✓
Banners, pictures/posters, and artwork		✓
Filing cabinet	✓	
Fence easels	✓	
Clock, refrigerator	✓	
Air purifier		✓
Diaper changing unit	✓	
Diaper changing pads		✓
Bibs, sippy cups		✓

TABLE D-1. NAVY SAMPLE FURNISHINGS AND EQUIPMENT

Activity boxes		✓
Nesting/stacking toys		✓
Muscic collection		✓
Puzzle racks		✓
Pound boards, sorting boxes, balls		✓
Rhythm instruments		✓
Cubbyholes, bins	✓	
Dress ups, hats		✓
Books		✓
Puppets		✓
Area rug(s)	✓	
Water play set		✓
Doll high chair(s), doll bed(s), doll house(s)		✓
Cook set(s)		✓
Science set(s), aquarium(s), magnets, stethoscope(s), and kaleidoscopes		✓
Pegs, tactile materials, bristle blocks		✓
Beads and lace		✓
Preschool CAR		
Cots	✓	
Cot sheets and blankets		✓
Chairs, tables, couch/chair	✓	
Double sided shelves, low shelving, book shelves	✓	
Sand/water table	✓	
Sand toys		✓
Art easels	✓	
Art smocks		✓
Play kitchen, play dishes, play food, play fruit, cultural food		✓
Tricycles	✓	
Workbench(s)	✓	
Trash containers	✓	
Music player		✓
Doll carriages, doll high chair(s), doll bed(s), doll house(s)		✓
Puzzles		✓
Cars, trucks, dolls		✓
Clock, refrigerator	✓	
Dress ups, hats		✓
Books		✓
60 puppets		✓
Area rug(s)	✓	
Woodwork set(s), water play set(s), cook set(s)		✓

TABLE D-1. NAVY SAMPLE FURNISHINGS AND EQUIPMENT

Science set(s), aquarium(s), magnets, stethoscope(s), kaleidoscopes		✓
Pegs, tactile materials, bristle blocks		✓
Beads and lace		✓
File cabinet	✓	
Parachutes		✓
Playhouses, picnic tables	✓	

D-2 **AIR FORCE.**

Use child-scaled materials and equipment in the care areas, toilets, and other areas frequented by children. These child-scaled elements include climbing platforms, plumbing fixtures, mirrors, windows, drinking fountains, counters, cabinets, cubbies, furniture, and tack boards, etc. If adult-sized equipment is provided in care spaces that must be used by children, make provisions to accommodate this use. Use pre-manufactured items whenever appropriate. Use durable and easily cleaned materials for these items.

TABLE D-2. AIR FORCE SAMPLE FF&E LIST

Reception	**Infant/Pre-Toddler CAR**
Built-in desks with lockable drawers, shelves, transaction counters	Cribs and evacuation cribs
Lockable compact refrigerator for controlled medications	Compact refrigerator (consider above counter for ease of access)
File cabinets	Infant swings
Personal computer(s)	Child height tables and chairs
Cash register	Adult rocking chair
CCTV monitors in designed wall	Trash receptacle (metal receptacle with a metal cover shall be specified at diapering area)
Intercom master controls	Plastic bag dispenser
Telephone	Towel dispenser
Time clock	Diaper changing paper/dispenser
Offices	Soiled laundry container
Desks, chairs	Child height shelving/toy storage
File cabinets	Adult height shelving
Personal computer	Tackboard/tackstrips
Copy machine, Telefax machine (in Admin Workroom)	Water/sand table
Telephone	Tape and/or CD player
Miscellaneous administrative equipment	Wall clock
Resource Lending Library	Diaper bag storage/cubbies
Bookshelves	Moveable, low, soft barrier around crawl area
Audiovisual equipment storage	Railing (handhold for walking)
Toy storage	Infant/Pre-Toddler Rooms.

TABLE D-2. AIR FORCE SAMPLE FF&E LIST

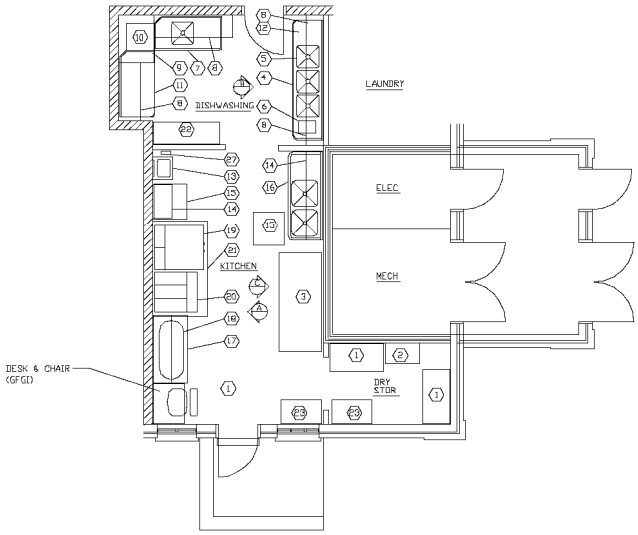
Miscellaneous resource/large equipment storage	**Toddler Activity Rooms.**
Supplies (paper, glue, etc.)	Child height tables and chairs
Isolation/Health Room/Toilet	Low book display units and shelves
Cot and/or porta-crib	CD, tape and/or record player
Storage for child's personal items	Tackboards/chalkboards/tack strips
Water closet, lavatory, soap and towel dispenser, trash receptacle, mirror, grab bars (provide handicap items if used by visitors)	Low equipment storage units
Staff Work Area/ Training Room/ Staff Room	Trash receptacle (metal receptacle with a metal cover shall be specified at diapering areas)
Work counter with outlets	Easels
Tables, chairs for training sessions	Cubbies
Personal computer(s)	Water/sand table
Copy machine	Tool and instrument pegboards
Scanner	Low and open shelving
Lounge seating, table	Wall clock
Telephone	**Laundry Room.**
Coffee counter (base/wall cabinet w/sink)	Washer(s), commercial or light commercial grade (1 per 100 children)
Microwave oven, refrigerator, coffee maker	Dryer(s), commercial or light commercial grade (1 per 100 children)
Rod and shelf for hanging garments	Folding counter (minimum 4 feet long)
Minimum one cubic foot for lockable staff personal storage	Utility Sink (with hot and cold water)
Tack Board	Securable storage cabinet for laundry supplies
Shelving	Laundry cart(s)
Wall clock	**Janitorial.**
	Shelving (minimum 20 lf)
	Mop sink (with hot and cold water)
	Janitor's cart (approximately 12 $ft.^2$)
	Mop/broom wall rack
	Mops, buckets, brooms, vacuum cleaners

APPENDIX E SAMPLE KITCHEN LAYOUTS AND EQUIPMENT

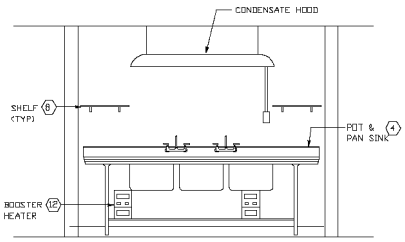
E-1 ARMY DESIGNS.

The following designs and equipment schedules are from the Army's standard design packages and are representative sizes for small, medium and large CDC kitchen facilities.

E-1.1 Small CDC.



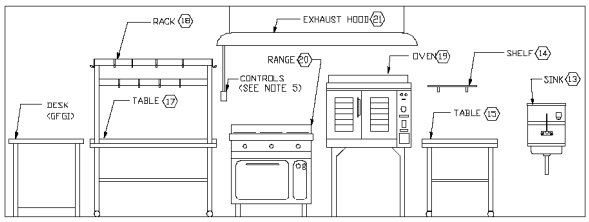
1 KITCHEN PLAN
1/50 MANDATORY



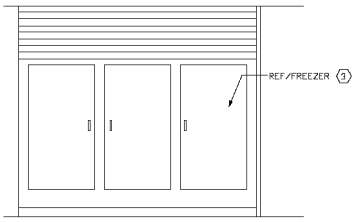
B ELEVATION
N.T.S. (DESIGN ALTERNATIVE)

KITCHEN EQUIPMENT LEGEND
MANDATORY

1. SHELVING, MOBILE
2. SHELVING, MOBILE
3. REFRIGERATOR/FREEZER, REACH-IN
4. SINK, POT AND PAN
5. HOOD, CONDENSATER
6. HEATER, BOOSTER
7. DISHTABLE, SOILED
7A. SPRAY ASSEMBLY
7B. GARBAGE DISPOSAL MACHINE
8. SHELF, WALL MOUNTED
9. HOOD, CONDENSATE
10. DISHWASHING MACHINE
11. DISHTABLE, CLEAN
12. HEATER, BOOSTER
13. SINK, LAVATORY
14. SHELF, WALL MOUNTED
15. TABLE, MOBILE
16. SINK, VEGETABLE PREPARATION
17. TABLE, MOBILE
18. RACK, UTENSILS
19. OVEN
20. RANGE
21. HOOD, EXHAUST
22. TRUCK, SHELF
23. TRUCK, UTILITY
24. OPENER (NOT SHOWN)
25. TOASTER (NOT SHOWN)
26. AIR CURTAIN FLY CONTROL MACHINES
27. PAPER TOWEL DISPENSER



A ELEVATION
N.T.S. (DESIGN ALTERNATIVE)



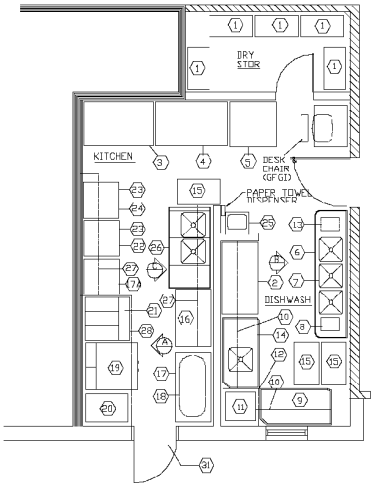
C ELEVATION
N.T.S. (DESIGN ALTERNATIVE)

DESIGNER NOTES:

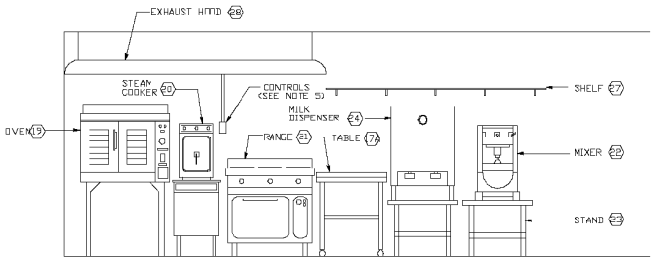
1. Kitchen equipment schedules are found in the supplemental booklet provided with the drawings.
2. Exterior kitchen door is 1050 mm x 2100 mm to facilitate movement of kitchen equipment into the facility.
3. Some of the trucks and tables are mobile type and will be used in other locations than shown. Location as shown is to indicate storage during non operating hours.
4. TB Med 530 allows chemical sanitizing of pots & pans. If this method is selected, the booster heater and condensate hood over pots and pans can be eliminated.
5. Control for exhaust hood shall be installed in accordance with manufacturers recommendation and within reach of kitchen staff.
6. All stainless steel kitchen equipment must meet the National Sanitation Foundation (NSF) standard of practice.
7. Ensure the refrigerators and freezer used in this facility are charged with a NON-ODP refrigerant which include R-22, R-134a and R-123

ALL DIMENSIONS ARE IN MILLIMETERS (MM) UNLESS OTHERWISE NOTED

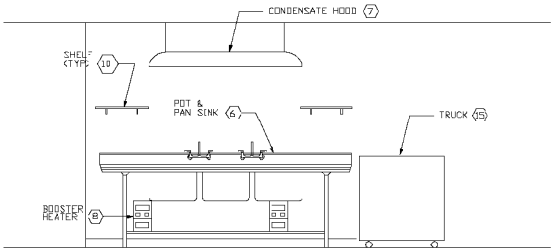
E-1.2 Medium CDC.



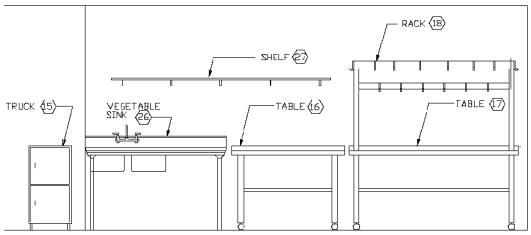
ENLARGED KITCHEN PLAN
1-25



ELEVATION
N.T.S.



ELEVATION
N.T.S.



ELEVATION
N.T.S.

KITCHEN LEGEND - 145

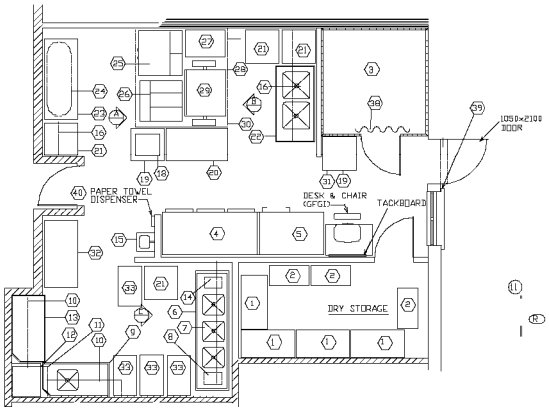
1. SHELVING, MOBILE
2. TRUCK, STORAGE
3. FROZEN FOOD CABINET
4. REFRIGERATOR, REACH-IN
5. REFRIGERATOR, REACH-IN
6. SINK, POT AND PAN
7. SPRAY ASSEMBLY (NOT SHOWN)
8. HOOD, CONDENSATE
9. HEATER, BOOSTER
10. DISHTABLE, SOILED
11. GARBAGE DISPOSAL MACHINE
12. SPRAY ASSEMBLY
13. SHELF, WALL MOUNTED
14. DISHWASHING MACHINE
15. HOOD, CONDENSATE
16. HEATER, BOOSTER
17. DISHTABLE, CLEAN
18. TRUCK
19. TABLE, MOBILE
20. TABLE, MOBILE
21. TABLE, MOBILE
22. RACK, UTENSILS
23. OVEN
24. COOKER, STEAM
25. RANGE
26. MIXING MACHINE
27. STAND
28. DISPENSER, BULK MILK
29. SINK, LAVATORY
30. SINK, VEGETABLE PREPARATION
31. SHELF, WALL MOUNTED
32. HOOD, EXHAUST
33. OPENER (NOT SHOWN)
34. TOASTER (NOT SHOWN)
35. AIR CURTAIN FLY CONTROL MACHINE

DESIGNER NOTES

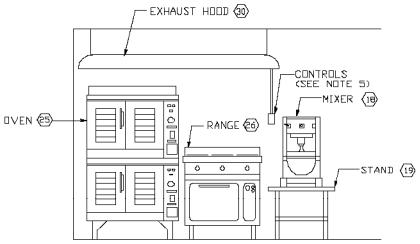
1. Kitchen equipment schedules are found in the supplemental booklet provided with the drawings.
2. The kitchen door is 1050 X 2100 (3'-6" x 7'-0") to facilitate movement of kitchen equipment into the facility.
3. Some of the trucks and tables are mobile type and will be used in other locations than shown. Location as shown is to indicate storage during non operating hours.
4. TB Med 530 allows chemical sanitizing of pots & pans. If this method is selected, the booster heater and condensate hood over pots and pans can be eliminated.
5. Controls for exhaust hood shall be installed in accordance with manufacturer's recommendation & within reach of the kitchen staff.
6. Ensure the refrigerators and freezer used in the facility are charged with a NON-ODP refrigerant which include R-22, R-134a and R-123.

ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

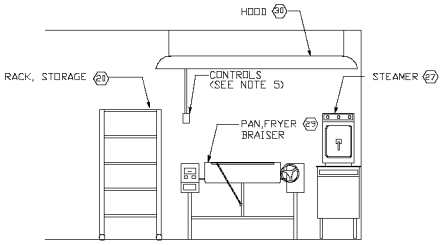
E-1.3 Large CDC.



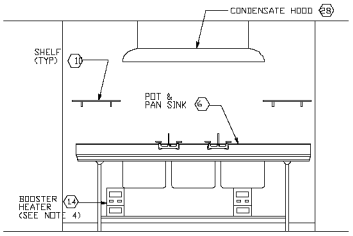
1 ENLARGED KITCHEN PLAN
1:25 MANDATORY



A ELEVATION
N.T.S. DESIGN ALTERNATIVE



B ELEVATION
N.T.S. DESIGN ALTERNATIVE



C ELEVATION
N.T.S. DESIGN ALTERNATIVE

KITCHEN EQUIPMENT LEGEND - 244

MANDATORY

1. SHELVING, MOBILE
2. SHELVING, MOBILE
3. REFRIGERATOR, WALK-IN
4. FROZEN FOOD CABINET
5. REFRIGERATOR, REACH-IN
6. SINK, POT AND PAN
7. HOOD, CONDENSATE
8. HEATER, BOOSTER
9. DISHTABLE, SOILED
10. SPRAY ASSEMBLY
11. GARBAGE DISPOSAL MACHINE
12. SHELF, WALL MOUNTED
13. HOOD, CONDENSATE
14. DISHWASHING MACHINE
15. DISHTABLE, CLEAN
16. HEATER, BOOSTER
17. SINK, LAVATORY
18. SHELF, WALL MOUNTED
19. NOT USED
20. MIXING MACHINE
21. STAND
22. RACK, STORAGE
23. TABLE, MOBILE
24. SINK, VEGETABLE PREPARATION
25. TABLE, MOBILE
26. RACK, UTENSILS
27. OVEN
28. RANGE
29. COOKER, STEAMER
30. HOOD, CONDENSATE
31. PAN, FRYING-BRAISING
32. FAUCET
33. HOOD, EXHAUST
34. DISPENSER, BULK MILK
35. TRUCK, STORAGE
36. TRUCK, UTILITY
37. OPENER, (NOT SHOWN)
38. TOASTER, (NOT SHOWN)
39. MEAT SLICING MACHINE, (NOT SHOWN)
40. SCALE, (NOT SHOWN)
41. DOORWAY CLOSURES
42. AIR CURTAIN FLY CONTROL MACHINES
43. PAPER TOWEL DISPENSER

DESIGNER NOTES:

1. Kitchen equipment schedules are found in the supplemental booklet provided with the drawings.
2. Exterior kitchen door is 1050 mm x 2100 mm to facilitate movement of kitchen equipment into the facility.
3. Some of the trucks and tables are mobile type and will be used in other locations than shown. Location as shown is to indicate storage during non operating hours.
4. TB Med 530 allows chemical sanitizing of pots & pans. If this method is selected, the booster heater and condensate hood over pots and pans can be eliminated.
5. Control for exhaust hood shall be installed in accordance with manufacturers recommendation and within reach of kitchen staff.
6. All stainless steel kitchen equipment must meet the National Sanitation Foundation (NSF) standard of practice.
7. Ensure that refrigerators and freezers used in this facility are charged with a NON-ODP Refrigerant which include R-22, R-134a and R-123.

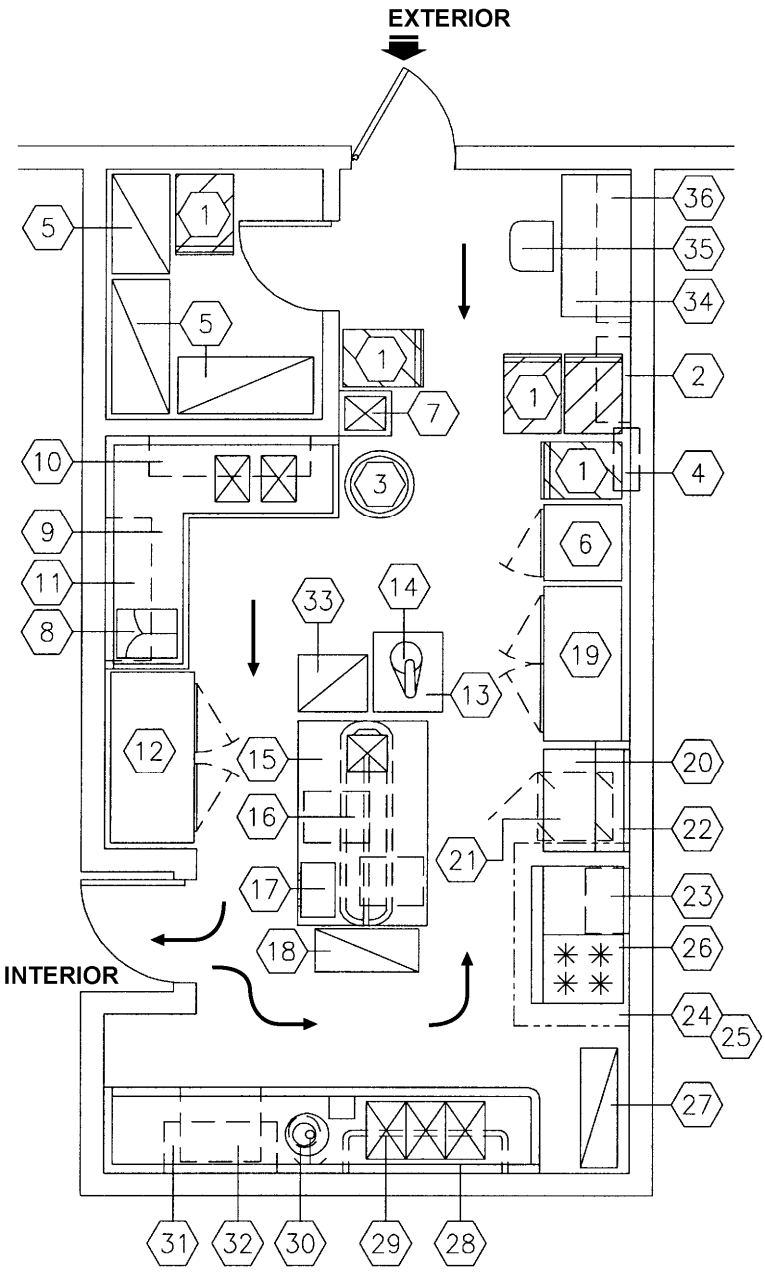
ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED

E-2 NAVY DESIGNS.

The following are Navy-produced sample layouts for small, medium and large kitchens and corresponding equipment lists. The kitchen should be designed by a qualified kitchen designer. Note that the drawings are not to scale.

The CDC kitchens are designed to support short term storage, warming and food preparation. Delivery of supplies arrives from exterior of the building and trash is removed to a dumpster along this route. Trained staff prepares and wash-up. The central table and refrigerator are used to stage the foods before loading on the carts. One food delivery utility cart for each CAR is loaded with food and beverage and transported through the interior kitchen door to each classroom where it remains. When meal service is complete, the cart is returned to the kitchen for wash-up.

E-2.1 Small CDC.



1 Food delivery utility carts (NSF approved or equivalent standards), with three shelves of minimum shelf size 18-in. x 26-in. (455 mm x 660 mm) and overall maximum height of 34 in. (865 mm)

2 Optional stainless steel wall shelf over food delivery utility carts at 12 in. (305 mm) deep *

3 Trash receptacle of minimum 44 gallons (167 L) on mobile trash receptacle dolly

4 Fire protection system panel *

5 Stationary shelving units (NSF approved or equivalent standards) for dry storage

6 Reach-in freezer, single door, of 19 ft.^{3} (.54 m^3) minimum capacity

7 Hand sink, wall mounted with support brackets *

8 Optional slicer (NSF approved or equivalent standards)

9 "L" shaped food preparation stainless steel work table with turned-up rolled rim edges, 6-in. (150 mm) high back splash, drain boards, work sinks *

10 Stainless steel wall shelf over prep work sinks *

11 Stainless steel wall shelf over prep work surface *

12 Reach-in refrigerator, two door, of 46 ft.^{3} (1.3 m^3) minimum capacity for snacks *

13 Optional mobile stainless steel mixer stand

14 Optional mixer, 12 qt. (11.4 L) (NSF approved or equivalent standards)

15 Cook's and snack preparation island stainless steel work table with counter work sink, under shelf, double sided over shelf *

16 Ceiling mounted pot rack *

17 Optional bulk milk dispenser with two 6-gallon (22.7-l) single service containers (NSF approved or equivalent standards)

18 Shelving unit (NSF approved or equivalent standards) for service dishes

19 Reach-in refrigerator, two door, of 46 ft.^{3} (1.3 m^3) minimum capacity *

20 Stainless steel work table with cross bracing on back and sides *

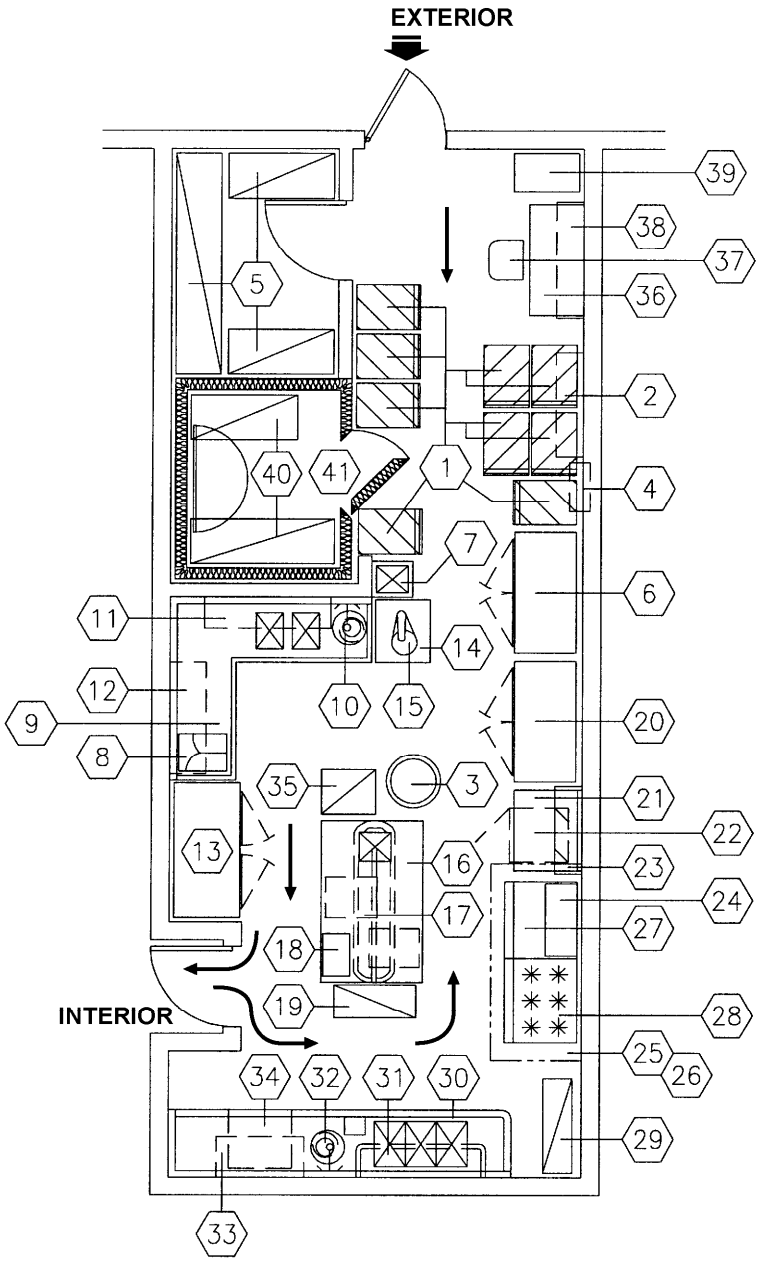
21 Optional mobile food warmer with universal rack slides and maximum height of 34.25 in. (870 mm) (NSF approved or equivalent standards) *

22 Optional stainless steel shelf over cook's work table for spices, utensils and miscellaneous items *

23 Optional stainless steel wall shelf over the griddle for spices, utensils and miscellaneous items (may be part of restaurant range) *

24 Exhaust hood, low volume high velocity (remote make-up air, if necessary) *
25 Fire protection system, either water mist or wet chemical agent *
26 Restaurant range (48 in. (1220 mm) left to right) with convection oven base and cooking surface consisting of four burners and 24-in. (610-mm) wide griddle *
27 Shelving unit (NSF approved or equivalent standards) for clean pots and pans *
28 Pot and pan ware washing stainless steel table with turned-up rolled rim edges, 10 in. (255 mm) high back splash, three pot and pan washing sinks, drain boards, drain board mounted garbage disposal, vacuum breaker and open base with legs and cross bracing *
29 Optional stainless steel, wall-mounted pot rack and wall shelf *
30 Optional garbage disposal with back splash mounted pre-rinse *
31 Optional wall-mounted stainless steel dish rack shelf (42 in. (1065 mm) left to right minimum) *
32 Optional under-counter dishwasher (NSF approved or equivalent standards) *
33 Stainless steel shelving unit (NSF approved or equivalent standards) for clean dishes, pitchers, cups *
34 Office desk, single pedestal
35 Office chair
36 Wall shelf over desk *
* Built-in equipment

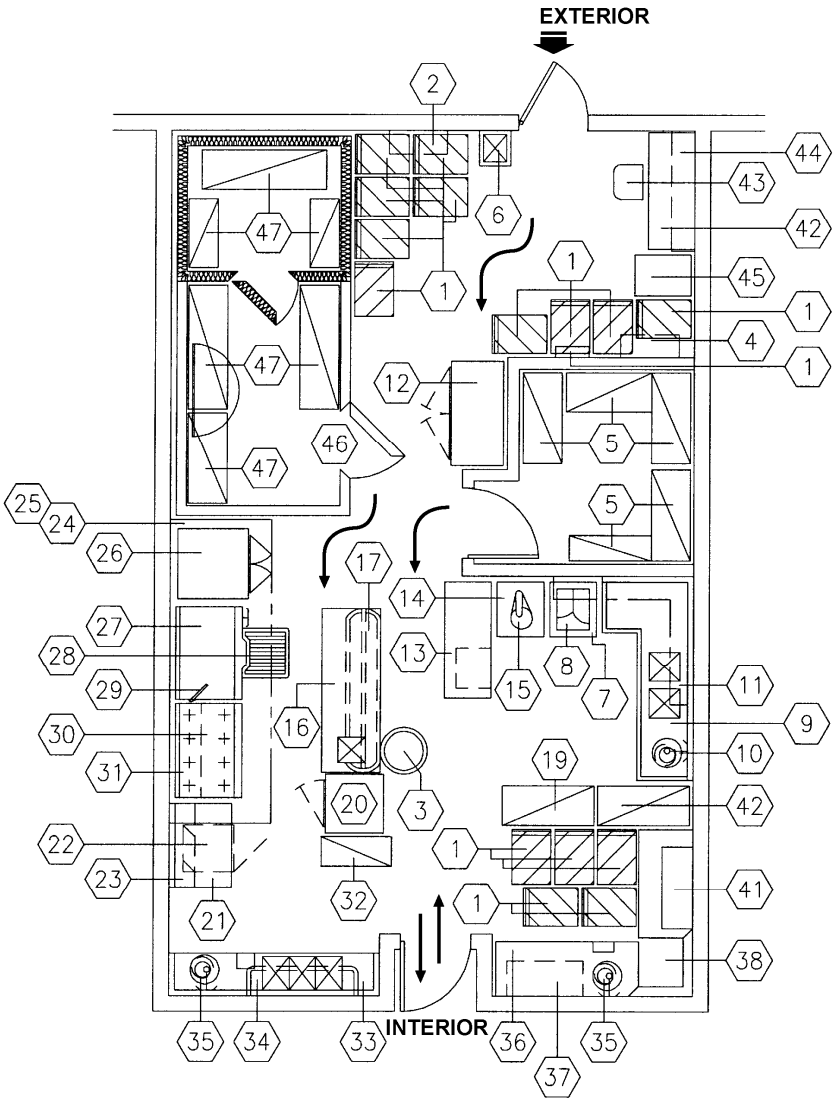
E-2.2 Medium CDC.



1 Food delivery utility carts (NSF approved or equivalent standards), with three shelves of minimum shelf size 18 in. x 26 in. (455 mm x 660 mm) and overall maximum height of 34 in. (865 mm)
2 Optional stainless steel wall shelf over food delivery utility carts (12 in. (305 mm) deep) *
3 Trash receptacle of minimum 44 gallons (167 l) on mobile trash receptacle dolly
4 Fire protection system panel *
5 Stationary shelving units (NSF approved or equivalent standards) for dry storage
6 Reach-in freezer, single door, of 19 ft.^{3} (.54 m^3) minimum
7 Hand sink, wall mounted with support brackets *
8 Optional slicer (NSF approved or equivalent standards)
9 "L" shaped food preparation stainless steel work table with turned-up rolled rim edges, 6-in. (150-mm) high back splash, drain boards, work sinks *
10 Optional garbage disposal, control panel and back splash mounted pre-rinse *
11 Stainless steel wall shelf over prep work surface *
12 Stainless steel wall shelf over prep work surface *
13 Reach-in refrigerator, two door, of 46 ft.^{3} (1.3 m^3) minimum for snacks *
14 Optional mobile stainless steel mixer stand
15 Optional mixer, 12 qt. (11.4 l) (NSF approved or equivalent standards)
16 Cook's and snack preparation island stainless steel work table with counter work sink, under shelf, double sided over shelf *
17 Ceiling mounted pot rack *
18 Optional bulk milk dispenser with two 6-gallon (22.7-l) single service containers (NSF approved or equivalent standards)
19 Shelving unit (NSF approved or equivalent standards) for service dishes
20 Dual temperature reach-in refrigerator/freezer with two full-length doors each of 19 ft.^{3} (.54 m^3) minimum capacity *
21 Stainless steel work table with cross bracing on back and sides *
22 Optional mobile food warmer with universal rack slides and maximum height of 34.25 in. (870 mm) (NSF approved or equivalent standards) *
23 Optional stainless steel shelf over cook's work table for spices, utensils and miscellaneous items *

24 Optional stainless steel wall shelf over the griddle for spices, utensils and miscellaneous items (may be part of restaurant range) *
25 Exhaust hood, low volume high velocity (remote make-up air, if necessary) *
26 Fire protection system, either water mist or wet chemical agent *
27 Optional griddle, (36 in. (915 mm) left to right) with convection oven base *
28 Six burner Range (36 in. (915 mm) left to right) with convection oven base *
29 Shelving unit (NSF approved or equivalent standards) for clean pots and pans
30 Pot and pan ware washing stainless steel table with turned-up rolled rim edges, 10-in. (255-mm) high back splash, three pot and pan washing sinks, drain boards, drain board mounted garbage disposal, vacuum breaker and open base with legs and cross bracing *
31 Optional stainless steel wall mounted pot rack and wall shelf *
32 Optional garbage disposal with back splash mounted pre-rinse *
33 Optional wall mounted stainless steel dish rack shelf (42 in. (1065 mm) left to right minimum) *
34 Optional under-counter dishwasher (NSF approved or equivalent standards) *
35 Stainless steel shelving unit (NSF approved or equivalent standards) for clean dishes, pitchers, cups *
36 Office desk, single pedestal
37 Office chair
38 Wall shelf over desk *
39 Vertical file, four drawer
40 Mobile shelving units (NSF approved or equivalent standards) for walk-in refrigerator
41 Walk-in refrigerator and medium temperature refrigeration system *
* Built-in equipment

E-2.3 Large CDC.



1 Food delivery utility carts (NSF approved or equivalent standards), with three shelves of minimum shelf size 18 in. x 26 in. (455 mm x 660 mm) and overall maximum height of 34 in. (865 mm)
2 Optional stainless steel wall shelf over food delivery utility carts at 12 in, (305 mm) deep *
3 Trash receptacle of 44 gallons (167 l)) minimum capacity on mobile trash receptacle dolly
4 Fire protection system panel *
5 Stationary shelving units (NSF approved or equivalent standards) for dry storage
6 Hand sink, wall mounted with support brackets *
7 Mobile, stainless steel slicer stand
8 Optional slicer (NSF approved or equivalent standards)
9 "L" shaped food preparation stainless steel work table with turned-up rolled rim edges, 6-in. (150-mm) high back splash, drain boards, work sinks *
10 Optional garbage disposal, control panel and back splash mounted pre-rinse *
11 "L" shaped stainless steel wall shelf over prep work sinks and drain boards *
12 Reach-in refrigerator, two door, of 46 ft.^{3} (1.3 m^3) minimum capacity for snacks *
13 Mobile stainless, snack work table with utensil drawer, under shelf and locking casters
14 Optional mobile stainless steel mixer stand
15 Optional mixer, 20 quart (18.9 l) (NSF approved or equivalent standards)
16 Cook's island stainless steel work table with counter work sink, utensil drawer, under shelf, double sided over shelf *
17 Ceiling mounted pot rack *
18 Optional bulk milk dispenser with two 6-gallon (22.7-l) single service containers, NSF approved or equivalent standards (not shown on drawing)
19 Shelving unit (NSF approved or equivalent standards) for service dishes
20 Single section, dual temperature reach-in refrigerator/freezer with two full length doors each of 19 ft.^{3} (.54 m^3) minimum capacity *
21 Stainless steel work table with cross bracing on back and sides *

22 Optional mobile food warmer with universal rack slides and maximum height of 34.25 in. (870 mm) (NSF approved or equivalent standards) *
23 Optional stainless steel shelf over cook's work table for spices, utensils and miscellaneous items *
24 Exhaust hood, low volume high velocity (remote make-up air, if necessary) *
25 Fire protection system, either water mist or wet chemical agent *
26 Double full size convection ovens with cook and hold feature and glass doors *
27 Optional tilting griddle/braising pan with 43 in. x 24 in. (1090 mm x 610 mm) typical cooking surface *
28 Optional stainless steel floor trough for tilting/braising pan *
29 Optional pot filler faucet. Mounted on wall or as an option with tilting griddle/braising pan *
30 Eight burner range (48 in. (1220 mm) left to right) with convection oven base *
31 Optional stainless steel wall shelf over the range for spices, utensils and miscellaneous items (may be a range option item) *
32 Shelving unit (NSF approved or equivalent standards) for clean pots and pans
33 Pot and pan ware washing stainless steel table with turned-up rolled rim edges, 10 in. (255 mm) high back splash, three pot and pan washing sinks, drain boards, drain board mounted garbage disposal, vacuum breaker and open base with legs and cross bracing *
34 Optional stainless steel wall mounted pot rack and wall shelf *
35 Optional garbage disposal with back splash mounted pre-rinse *
36 Soiled dish table with cone/drain board mounted garbage disposal and open base *
37 Wall-mounted stainless steel dish rack shelf (42 in. (1065 mm) left to right minimum) *
38 Corner dish washer with booster heater (NSF approved or equivalent standards) *
39 Clean dish table with open base *
40 Wall-mounted stainless steel dish rack shelf over clean dish table (42 in. (1065 mm) left to right minimum) *
41 Stainless steel shelving unit (NSF approved or equivalent standards) for clean dishes, pitchers, cups *
42 Office desk, double pedestal
43 Office chair
44 Wall shelf over desk *
45 Vertical file, four drawer
46 Combined walk-in refrigerator/freezer unit and medium and low temperature refrigeration systems *
47 Mobile shelving units (NSF approved or equivalent standards) for walk-in refrigerator/freezer
* Built-in equipment

APPENDIX F GLOSSARY

ADA. Americans with Disabilities Act, Department of Justice, Office of the Attorney General.

ADAAG. Americans with Disabilities Act Architectural Guidelines, Department of Justice, Office of the Attorney General.

AEI. Architectural and Engineering Instructions.

AFA. Actual Floor Area: The number of square feet or meters required as measured from the inside face of walls, partitions, doors, and glazing. AFA includes area required for built-in case goods, fixtures, and equipment.

AFCEE. Air Force Center for Environmental Excellence.

AFCESA. Air Force Civil Engineer Support Agency

AFI. Air Force Instruction.

AFSVA. Air Force Services Agency.

AIA. American Institute of Architects.

ASTM. American Society for Testing and Materials. The organization that develops standards and provides related information on characteristics and performance of materials, products, systems, and services.

ATFP. Anti-Terrorism Force Protection.

BEAP. (Military) Base Exterior Architectural Plan.

BUPERS. See Navy Personnel Command.

Capacity. Also Operational Capacity. The total number of children that may be cared for at any one time. See also Group and Ratio.

CAR. Child Activity Room.

Caregiver. Individuals providing direct care services to children in CDCs. The term, as used in this document, does not denote level of education, training, or staff status. Caregivers include head teachers, assistant teachers, aides, and all others who interact with children on a routine basis for a major part of each day.

Caring for our Children: The National Health and Safety Performance Standards: Guidelines for Out-of-Home Child Care Programs.

CCTV. Closed circuit television.

CDC. Child Development Center.

CDH. Child Development Home.

CDPA. Child Development Program Assistant.

CDS. Child Development Services.

Child Activity Rooms. The architecturally defined areas in which care is provided for each group of children.

CNO. Chief of Naval Operations.

CPSC. US Consumer Product Safety Commission.

dBA. Decibels. A unit of measurement for the relative intensity of sound. From 0 (barely perceptible) to 130 (painfully loud), on average.

Dead End Corridor. A portion of the egress corridor which does not lead to an exit and which would require an occupant to retrace his or her steps to reach a safe exit in an emergency. The maximum allowable length is regulated by applicable codes.

DM. Design Manual.

DoD. Department of Defense.

EFA. Engineering Field Activity.

EFD. Engineering Field Division.

EMCS. Energy management and control system.

EPA. Environmental Protection Agency.

FADS. Fire alarm and smoke detection system.

FCC. Family child care.

FED-STD. Federal standard.

GFA. Gross Floor Area: The total area of all floors of a building including main building lobbies, elevator shafts, egress stairwells and exterior partitions measured to the exterior side of the exterior wall.

GFCI. Ground-Fault Circuit Interrupter

Group. The maximum number of children, as determined by age group, who are cared for in the same self-contained activity room. See also Capacity and Ratio.

HUD. Department of Housing and Urban Development.

HVAC. Heating, ventilating, and air conditioning.

ILE. Air Force Installations and Logistics, Engineering

ILV. Air Force Installations and Logistics, Services

Infant. A child 6 weeks through 12 months of age.

MAJCOM. Air Force Major Command.

MACOM. Army Major Command.

MCO. Marine Corps Order.

MILCON. Military construction.

MIL-HDBK. Military handbook.

Mixed-age Group. A group of children in a child development program drawn from more than one age group.

NAVFAC or NAVFACENGCOM. Naval Facilities Engineering Command.

NAEYC. National Association for the Education of Young Children: A professional organization of early childhood specialists concerned with the care and development of children. The national accrediting agency for quality early childhood programs.

NFPA. National Fire Protection Association.

NFA. Net Floor Area: The amount of occupiable space to accommodate a space requirement.

NPC PM. Navy Personnel Command Program Manager

OPNAV. Chief of Naval Operations.

Outdoor Activity Area. The Outdoor Activity Area is the exterior, fenced space adjacent to the building that provides for supervised outdoor play activities for the child occupants of the building. It is not simply a place for “recess” but is designed to support a program of activities and be conducive to creative play. It serves as an extension of the interior activity room space.

PA. Public address.

Parents. For the purposes of this UFC, “parent” is understood to include legal guardians responsible for a child.

Playground. Playground may refer to the age-appropriate areas within the outdoor activity area. The outdoor activity area is divided into at least three play areas: one for infants, one for toddlers, and one for Preschoolers. Pre-toddlers will use the infant play

area or the toddler play area, as appropriate. The term playground may also refer generically to the outdoor activity area or any of its components.

Preschool Child. A child who is 3 to 5 years old and who does not attend kindergarten or a higher grade.

Pre-toddler. A child between the ages of 12 through 24 months. This age group may also be classified as toddlers, but in this document the category has been broken down into pre-toddler (ages one to two) and toddler (ages two to three). (See Toddler.)

Primary Caregiver. Principal person identified to be responsible for an assigned group of children.

RAMP. Requirements and Management Plan.

Ratio. The ratio of caregivers to children, i.e., the number of children one caregiver may be responsible for, varying by age of children. See also Group and Capacity.

R&R. Resource and referral.

RCCC. Navy Regional Child Care Center Coordinator

School-age Child. A child who is six years of age or older or who attends kindergarten or higher.

SPS. Special (or supplemental) programs and services.

STC. Sound Transmission Class. A sound rating for walls and partitions.

Toddler. A child between the ages of 24 and 36 months. Children as young as 12 month old may also be classified as toddlers, but in this document the category has been broken down into pre-toddler (12 – 24 months) and toddler (24 – 36 months). (See Pre-toddler.)

Toilet. This refers to the room or space and includes both the water closet and the lavatory (sink and counter)

UAS. Uninterrupted Activity Space. UAS is defined as space in a care area used exclusively for activity. It excludes all fixed equipment and furnishings (i.e. the diaper changing station, the food preparation station, the toileting areas, storage areas, etc.) and any dedicated circulation space.

UFAS. Uniform Federal Accessibility Standards.

USDA. United States Department of Agriculture.

USDA CACFP. United States Department of Agriculture and Child and Adult Care Food Program. Guidelines on food preparation, nutritional requirements, and kitchen and storage areas.